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THE

WESTERN JOURNAL,

AND

Civilian,

DEVOTED TO

Agriculture, Manufactures, Mechanic Arts, Internal Improvement, Commerce,

PUBLIC POLICY,

AND

POLITE LITERATURE.

Agriculture and the Mechanic Arts are the basis of Civilization.

M. TARVER & H. COBB,

EDITORS & PROPRIETORS.

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THE

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and Civilian.

VOL. XIII. December, 1854. No. I.

ARTICLE I.

Commercial and Financial Aspects.

IN recurring to this subject at the present time, we experience an unusual degree of distrust in our ability to arrive at just and sound conclusions touching the business prospects of the current and ensuing year.

In this country especially, the subject of commerce and finance becomes from year to year more complicated and difficult to comprehend. For new enterprises in works of public improvement, mining and manufacturing; discoveries and improvements in physical science which bring into use new agents of production and exchange; the continually augmenting current of emigration, and the settlement of new territories; the increase of banks and banking operations; the rapid growth of cities; the advancing price of real estate, and increasing growth of foreign and domestic commerce, produce changes and new relations which escape the observation and baffle the judgement of the most attentive and astute observers.

Though this state of things may be justly regarded as denoting a rapid development of our national resources, yet it must be admitted, by the enlightened economist, that the increase of wealth in the United States is greatly overrated. The augmentation of wealth for some years past, has been estimated by a new method of calculation which gives the nominal, but not the real amount of increase. The enlargement of the volume of wealth consists of accumulations to the stock of useful commodities; the terms used to denote this enlargement are derived from an artificial and fallacious system of finance. Owing to the vacillating nature of this system, property which was valued at five thousand dollars two

years ago, may now be rated at ten thousand dollars; and two years hence it may fall even below the first estimate, though its productiveness and capacity to supply the wants of the owner may have remained the same during the entire period. In such a case, supposing the prices of property throughout the community to be affected by the same causes, the proprietor would be neither richer nor poorer, by reason of the fluctuations in the nominal value of his estate, provided he should confine his operations to the legitimate business of producing and exchanging his commodities at the current market rates. But in this country there are so many inducements stimulating individuals to acquire property on credit, that neither legislation nor experience can restrain them from overtrading and speculation. And it seems that when a spirit of speculation is once excited, it can be checked only by a financial revulsion.

It is the nature of commerce to expand to the utmost limit of the demand for its commodities, and even to go beyond until checked by an over-stocked market. But the legitimate operations of commerce rarely, and perhaps never, produce a general revulsion in the business of an entire country. For so long as commerce is confined to the exchange of commodities which are required for daily use and consumption, its operations will be modified by the wants of the consumers, and restrained by their ability to purchase and pay.

It is the traffic in commodities not strictly commercial which disturbs the financial condition of a country, and endangers the pursuit of commerce. Projects of public improvement and speculations in real estate, in connection with excessive banking, have been the disturbing elements of commerce for some years past, and all classes of the community are now deeply interested in the question whether the deranged state of trade and finance can be restored to a healthy condition without a severe, general revulsion.

In attempting to answer this inquiry, we shall in the first place look to the state of the mercantile account between this and foreign countries. We have not yet seen the officiel statement of imports and exports for the fiscal year ending 30th June, 1854; but taking the trade of New York as a fair criterion, we conclude that though there has been a large increase in the amount of imports, the exports, including specie, have probably exceeded the imports by $15,000,000. This is to be regarded as a very important im-

provement upon the business of the preceding year when the imports, including specie, were $37,002,490 more than the exports.

The history of the last five years, when the facts are fully considered, will show that the contest for capital which had been carried on for several years between the railroads and commerce, reached a crisis about the commencement of the year 1853; and though the former were compelled to yield to the overruling influence of the latter, yet both railroads and commerce were involved in embarrassments from which they have not yet recovered.

In a volume prepared by Mr. Andrews, and communicated by the Secretary of the Treasury to the Senate, on the 25th of Aug., 1852, it is stated that at least $80,000,000 was then annually required to carry forward works in progress, and to meet the demand of new ones. Of this sum, he says, "$50,000,000 are borrowed either of capitalists of this country or Europe." It is evident that this amount could not be drawn from its ordinary employment as the basis or agent of commerce without embarrassing its operations. But after all, there is perhaps no important branch of industry that has not been benefitted by the prosecution of our public works: commerce has received a wholesome check; and instead of being allowed to absorb the entire produce of the California mines, we have built some 8,000 miles of railroad since 1849. The railroad interest has suffered more than any other; but no one should feel disappointed, for every intelligent individual must have foreseen the result: it was not in the nature of things that such a vast amount of public work could be carried on successfully at the same time.

It was doubtless expected that railroad bonds and stocks would constitute a basis for commercial operations and, in a good degree, supply the place of the money withdrawn from the ordinary channels of trade. This was a plausible view of the subject, and in some measure true, but unfortunately the production of these commodities far exceeded the demand, and being subject to a rule of public economy to which there is perhaps no exception, they declined in price and became unsaleable, except upon terms ruinous to the holders. This was the weak point in the financial system of the times, and it is now the most difficult to overcome.

According to a report of the Secretary of the Treasury, in answer to a resolution of the Senate calling for the amount of American securities held in Europe and other foreign countries, on the

30th June, 1853, the bonds and stocks of the United States, individual States, counties and corporations, amounted to $1,362,752,596. The railroad bonds outstanding, and stocks paid in, according to this report, amounted to $480,005,519. We are not informed by the report whether the State and county bonds created in aid of railroads are included in this sum, but from the items which compose the general summary, we conclude that they are not included. We append the summary statement made by the Secretary of the Treasury for the inspection of the reader.*

It will be seen by reference to this statement that bonds and stocks to the amount of $1,178,567,882 are held in the United States: a sum at least four times as large as the whole amount of money, gold and silver, in the country. It is therefore a fair conclusión that much the greater portion of these securities was taken in the first instance by dealers who purchased them not as objects of permanent investment, but of speculation. If the owners are able to hold them, the financial condition of the country may be regarded as quite safe; but no proposition appears more clear to us than that, if a considerable portion of these securities should be forced upon the market within the next twelve months, enormous sacrifices, and perhaps a greater stringency in the money market will follow as necessary consequences. No matter how solvent the makers of the bonds, nor how large in reason the dividends on

* GENERAL SUMMARY, JUNE 30, 1853.

	Total.	Held by foreigners.
United States stocks	$58,205,517	$27,000,000
State stocks	190,718,221	72,931,507
113 cities and towns [bonds]	79,352,149	16,462,322
347 counties [bonds]	13,928,369	5,000,000
985 banks [stocks]	266,724,955	6,688,996
75 insurance companies [stocks]	12,829,730	378,172
244 railroad companies [stocks]	309,893,967	8,244,625
Do. Do. [bonds]	170,111,552	43,888,752
16 canal and navigation companies [stocks]	35,888,918	554,900
Do. Do. Do. [bonds]	22,130,569	1,967,547
15 miscellaneous companies [stocks]	16,425,612	802,720
Do. Do. [bonds]	2,358,323	265,773
Total	1,178,567,882	$184,184,714

If this estimate of Winslow, Lanier & Co. be preferred, as to the amount of state stocks held by foreigners, $110,972,108 must be substituted in the second line of the second column, and the total will then be—

Aggregate of stocks and bonds	$1,178,567,882
Aggregate held by foreigners	222,225,315
	1,400,793,197

stocks—prices must fall far below their intrinsic value. We are not in possession of facts which enable us to form anything like a correct opinion respecting the ability of those holding railroad and other public securities to retain them, but we conclude the issue will be determined chiefly by the foreign demand. It will be seen by the statement of the Secretary of the Treasury, that while about one half the United States, and State stocks is held by foreigners, that about ninety per cent. of the railroad stocks and bonds are in the hands of our own people. A variety of causes have conspired to prevent the sale of these commodities abroad. They are new, and their character not sufficiently known to authorize the more cautious purchasers to bid for them. Much capital has been required in Great Britain and on the continent to carry on works of public improvement, and supply the wants of commerce in those countries, and withal the prospect of a war which threatened to involve the principal powers of Europe, induced the larger capitalists to hold their means in readiness for home operations. But we are persuaded, that none of these causes exist in the same force now as they did one year ago. The people of Great Britain having taken a lesson in railroad economy, from which we of this country might have profited, have since the year 1850 been moving with great caution in the construction of their works. And we have heard of no new railroad projects on the continent for some time past. The check which is now being given to the importation of goods to this country by forced sales, at a loss as is stated of 25 per cent. on cost, will diminish the demand for money for commercial purposes. And the attitude assumed by the western powers of Europe having removed the apprehension entertained of a general war, there is reason for the belief that a demand will spring up abroad for American bonds and stocks, which will afford important relief to the holders in this country.

The extent and efficacy of this relief, however, will depend in a great measure upon the state of our foreign trade. For if the importations of foreign merchandize should continue so large as to require the exportation of gold as fast as it is produced, which seems to have been the case during the current year, the relief which would otherwise be afforded by the sale of railroad securities abroad will be greatly diminished.

No increase in the amount of our exports can be expected during the current fiscal year; for the excellency of the crops in Great

Britain and on the continent of Europe precludes the idea of any considerable demand upon this country for breadstuffs, a fact which will probably reduce the amount of exports in this branch of trade twenty million dollars below that of the last fiscal year. The abundance of the crop abroad however is to be regarded as a favorable circumstance, especially at a time when the crop of cereals in this country is below that of ordinary seasons. The crop of early cereals was at least a fair one throughout the United States, and the deficit in the corn crop though considerable, will not be severely felt except in localities distant from navigation and railroads; and all things considered, we conclude that the price of bread as a general thing will rule but little, if any higher, than it has for some years past. And owing to the abundant crops abroad, we are persuaded that the money value of our exports will fall but little short of the average of the last three years.

The producing classes are generally free from pecuniary embarrassments, though perhaps not in a condition to pay the merchant with their usual promptness. The capacity of the nation to produce wealth is daily increasing, and though works of public improvement may be compelled to suspend for a season, and individuals may fail in business, we conclude there is no ground to apprehend a serious and general revulsion, such as we have experienced in times past.

The causes which gave rise to the present state of things, have in part subsided. A decided check was given to the sale of railroad securities more than twelve months ago, and though occasional sales have been effected since, they have not materially augmented the amount; the vast current of commerce which moved in the direction of California, has subsided, and judging from the large quantities of merchandize recently sold at auction in New-York at prices below cost, we conclude that the imports of foreign goods will be reduced to an amount that can be paid for without parting with so large a quantity of specie as has been required for export annually since 1850.

These are national views of the subject, but a majority of our readers are more interested in discussions touching the financial condition of the Western States, and the means of escaping from the embarrassments that seem to threaten the affairs of this part of our common country.

It must be admittod that the prospects in the central region of the Mississippi Valley are not as encouraging as we could desire. The corn crop—the principal staple in the hog-growing districts—has failed to a greater extent here than in other parts of the United States; and the large quantity of land which will be purchased under the provisions of the late law graduating its price will occasion a scarcity of money for commercial purposes. But in all other respects we believe this part of the country, especially the State of Missouri, was never more prosperous, nor its people less involved in pecuniary embarrassments. The prices of every kind of produce have been highly remunerating for several years in succession, and the crops of hemp and tobacco, of the present year, will fall but little below the average of ordinary seasons. The products of these staples, and the money which has been accumulating in the hands of farmers for several years past, will afford sufficient means to enable them to meet their obligations with their usual promptness. The inconvenience and privations experienced from a partial failure of the corn crop, must be of short duration, and will be amply compensated by the lessons of economy which they are calculated to teach. Hence, we conclude that there is little cause of complaint, and none of alarm, respecting the financial condition of the people of Missouri.

Judging from the accounts from different parts of Iowa, we conclude that the crops of that State have not fallen below the yield of ordinary seasons, and the same may be said of the corn crop of a part of Northern Illinois; and hence it may be expected that the St. Louis market will be sufficiently supplied with this important commodity at reasonable prices.

But notwithstanding this favorable view of the resources of this region, they may be so used as to diminish their efficiency, and occasion a considerable degree of embarrassment to the commercial and financial operations of the country.

The principal thing to be apprehended at the present juncture, is overcautious conduct on the part of the people: the hoarding of money with a view to invest it in property at reduced prices; putting off the payment of debts on the plea of hard times; and holding on to produce expecting to obtain exorbitant prices. These are practices which men readily adopt whenever there is a prospect of profiting by them; and to the shame of the age be it said that panics like puffs are often produced by speculators.

To our view, the citizens of Missouri have little cause to be discouraged: the position of the State is daily gaining strength by the settlement of the new territories, Nebraska and Kansas; the just adaptation of our system of public improvements to the convenience and interests of every part of the region west of the Mississippi, becomes more apparent as emigration progresses westward; and if we manifest a spirit equal to the work we have undertaken, we shall not lack the means of its accomplishment.

Missouri has made one bold move, she must now make a second to sustain the first. She has undertaken a grand system of improvement, she must furnish the means to accomplish it.

ARTICLE II.

Valley of the Ohio.

BY MANN BUTLER, ESQ.

Continued from page 408, vol. XII. No. 6.

Great Land Court of Kentucky. Fort Jefferson on the Mississippi. Clark's Expedition against Chilicothe and Pickaway. Kentucky county divided into the three counties of Fayette, Jefferson and Lincoln. Officers of these counties. Marine of Kentucky.

On the 13th of October, 1779, this great land court was opened at St. Asaphs, or Logan's station, near Standford, in Lincoln county, and John Williams was appointed clerk. Some specimens of their adjudications shall be furnished for the gratification of the reader curious in these matters. It may be well to precede these transcripts of proceedings, by an explanation of some of the technical terms used in this memorable law: a *settlement right* consisted in an allowance of "400 acres, or such smaller quantity, as the party may choose to include his improvement, or cultivation, granted to any person, who should at any time before the first of January, 1778, have really and bona fide settled himself, or his family, upon any waste and unappropriated lands on the western waters, to which no other hath any legal right or claim." For this grant two dollars and a quarter per hundred acres were required by the State of Virginia. A *Premption right* was a right which every person entitled to a settlement possessed to pay the State price for any quantity adjoining his settlement, not exceeding a

thousand acres. These claims were to be paid for, at the rate of forty dollars per hundred acres. Under this law, so unfortunate in practice, yet apparently so beneficent in appearance, the following are transcripts of proceedings. "*Michael Stoner* this day appeared and claimed a right to a settlement and premption to a tract of land lying on Stoner's fork of Licking, about 12 miles above Licking station, by making corn in the country, in the year 1775, and improving the said land in 1776: satisfactory proof being made to the court, they are of opinion that the said Stoner has a right to a settlement of four hundred acres of land, including the above mentioned improvement and a premption of one thousand acres adjoining the same, and that a certificate issue accordingly." "*Joseph Combs* this day claimed a right to a premption of one thousand acres of land lying on Comb's, since called Howard's creek, about eight miles above Boonesborough, on both sides of the creek, and about three or four miles from the mouth of it, by improving the said land, by building a cabin on the premises, in the month of May, 1775. Satisfactory proof having been made to the court, they are of opinion that the said *Combs* has a right to a premption of one thousand acres including the said improvement, and that a certificate issue accordingly." One more instance will complete the specimens of the different classes of adjudication. "*Robert Espie* this day appeared and claimed a premption of four hundred acres of land, he being a settler in this country, *who made corn* in the year 1778, as appears by testimony, lying on the waters of Paint Lick, near the land of William Kennedy, at a spring with the letters "R. A." cut on each tree. The court are of opinion that the said *Espie* has a right to the premption of four hundred acres according to law, and that a certificate do issue for the same."

Such are specimens of the decisions of this court, so interesting to the pioneers of Kentucky — the foundation of their landed estate. This court assembled at different parts of the country, to accommodate the settlers; at St. Asaphs, Harrodsburg, Falls of Ohio, Bryant's station, and finally at St. Asaphs again, when having determined about three thousand claims of different kinds, on the 26th of April, 1780, declared the expiration of its powers, and adjourned sine die. The land law under which the court sat, overflowing as it seems with charity and consideration for the meritorious settler, amidst the hardships and perils of the wilderness,

selling them farms even upon these low terms, or credit, was a measure of legislation most fruitful of curses and calamities to community. It has proved a perfect Pandora's box to Kentucky, constantly tricking her industrious and enterprising citizens out of the fruits of their brave and hardy exertions; distracting the courts and the legislature of Kentucky with its perplexities and refinements; but of this again.

The year 1780 was remarkable for the establishment of Fort Jefferson, on the Mississippi, five miles below the junction of the Ohio with that stream. Col. Clark effected this measure, in conformity with instructions from Gov. Jefferson, in order to fortify the claim of the United States to the boundary of the left or eastern bank of the Mississippi, south of the Ohio. It is now well known that neither the government of France or Spain was friendly to the extension of the American boundary to the Mississippi. Every artifice of diplomacy was resorted to by these powers, on both sides of the Atlantic, to prevent this aggrandizement of the United States. The French minister at Philadelphia had not only disgracefully prevailed in the old Congress of the Confederation, to instruct its ministers in France, "to govern themselves by the advice and opinion of the French government; to increase the number of plenipotentiaries, in order to overrule the elder Adams; and finally obtained, [no doubt through the instigation of Spanish influence on the members, and at the instance of Virginia too, an instruction to Mr. Jay [afterwards the first chief Justice of the U. S.,] not to *insist* on the free navigation of the Mississippi below the latitude of thirty-one degrees north. Spain indeed, and not feebly supported by France, endeavored to limit these States east of the Alleghany mountains, and to divide the *Valley of the Ohio* between Spain and Great Britain. This attempt to convert the *Valley of the Ohio* into British and Spanish provinces, will merit a further notice, in another part of this work. Let it remind us of the able patriot, John Jay, who resisted, under clouds of embarassment at Paris and Madrid, this severance of the old British colonies, as they had been acknowledged by the treaty of Paris, in 1763.*

A most elaborate statement of the American claims was drawn up by a committee of Congress, on the 7th of October, 1780. In this paper reference is specially made, among other weighty con-

* Jay's Life, I. 237.

siderations, to the fact, that the United States had "obtained possession of all the important posts and settlements on the Illinois and the Wabash, rescued the inhabitants from British dominion, and established civil government in its proper form over them. They have, moreover, established a post in a strong and commanding situation, near the mouth of the Ohio.* It was in the spring of this year, that this fort was established, and it has been seen that the dispatch from Congress, which is attributed by Mr. Pilkin to Mr. Madison, was drawn up in the ensuing October. The express instructions of Gov. Jefferson, of the 28th of June, 1778, to Col. Clark, contained in his papers, now conclusively show that the politic measure of establishing this fort on the Mississippi and below the Ohio, is due to the comprehensive mind of this statesman. Col. Clark, on receiving these instructions, left Kaskaskia and established this post in the lands of the Chickesaws, without having obtained their consent. Although his instructions authorised him to *compensate* the tribe for their territorial claim, Clark had not either time or inclination for such a work, not very agreeable to his notions of Indian management. After having effected this object, Clark with two men, Josiah Harland and Harmar Conolly, proceeded from the fort to Harrodsburg. The perils and hardships of such a march can scarcely be imagined at this day of peace and all the appliances of comfort. They had painted themselves like Indians, and had advanced without interruption as far as the Tennessee river. This they found foaming with high water, and Indians hunting on both sides of the river. Our chief and his companions quickly fastened a raft together with grape vines, on which to transport their rifles and clothes, and dashed into the river, in its state of flood. They had got some distance, before they were perceived by the Indians, owing to the high banks of the river; when the enemy perceived them, they quickly exchanged whoops of intelligence. But our party availing itself of a deep creek which put in, on the opposite side of the river, placed it between them and their pursuers by landing below its mouth; while the Indians had to ascend the stream in order to find a passage. The white party having landed, dashed on their destination, and escaped. Their disguise was so complete, that in approaching a fort on Red River, they were mistaken for Indians; and it was only

* Pilkin's United States, 2, 512. Spark's Letters to Washington, vol. II, 313.

the name of Clark, loudly hallooed, and the knowledge of his exploits then in every woodman's mouth, that removed the impression.

On arriving at Harrodsburg, Clark found a concourse of people from every direction, waiting to enter lands in the surveyor's office, under the new land law of Virginia. The acquisition of the new lands was the engrossing subject of all men's thoughts, as eagerly and with as much avidity amidst these hostile forests as in any stock market of a peaceful commercial city. To propose a military expedition to men under such keen and potent excitement would have been worse than useless. The public interests would not be regarded under such circumstances of individual engrossment. Should the more generous listen to them, they would leave the selfish and grasping speculator behind, to despoil them of the richest fruits of the country they were defending, at the peril of their lives and those of their families. In this predicament, Clark proposed to Mr. G. May, the surveyor of Kentucky county, to shut up his office, and then all would turn their attention to the defence of the country. This Mr. May declared he had no authority to do; but if Col. Clark would issue such an order, he would be the first man to obey it. The Colonel accordingly caused a written order to be placed on the door of the surveyor's office, notifying all persons that the office was shut by his authority, until after an expedition could be conducted against the enemy. This measure, and the high military character of Clark, procured any number of volunteers, in addition to his own State regiment, then garrisoning Fort Nelson, on the Falls of Ohio.

This expedition commanded by Clark, consisted of two regiments; one under the command of Col. B. Logan, the other under that of Col. Wm. Linn. The point of rendezvous was for both the mouth of Licking river, where they assembled with *artillery* conveyed up the river from the Falls; and in all probability brought from either Kaskaskia or St. Vincents. This force, when all assembled, amounted to nearly a thousand men.* When Clark reached the Falls, he found a letter from Gov. Jefferson advising such an expedition, dated the 19th of April, 1780; but not received until the 11th of the July following.

The secrecy and dispatch which had attended the movements of this most efficient officer on former commands, continued to mark

* Col. Patton, who was in the expedition, informed the author that it was exactly, by the rolls, 998.

his progress on this. The Indian towns of Chilicothe, on the Little Miami, and Pickaway, a principal town of the Shawnees, on Mad river, a branch of the Great Miami, were surprised and destroyed, together with the crops around them. In addition to this punishment of the enemy, with a loss of seven warriors on their part, there were as many on our own, so rarely did we ever get the advantage of inferior numbers slain, in our most successful encounters with Indians.

There was another favorite object; this was an old French store situated on an upper branch of the Great Miami, where a previous trading post had been established by British traders, and which had been destroyed by the French, in 1752; the traders had been sent prisoners to old France. This store was well known as *Loramie's* store, is referred to as much in all the early treaties of the Indians with our countrymen — in 1785 at Fort McIntosh, in 1789 at Fort Harmar, and 1795 at Fort Greenville. It was an object of particular vengeance as furnishing the Indians with arms and ammunition as well as stores of every kind: it was totally destroyed. The laying waste the little vegetable patches of the Indians, and not much larger corn-fields, can alone be justified, as the only means of bringing home the calamities of war to barbarians who, without the intervention of a large civil body of society, not partakers in the war, can only be made to feel its horrors by bringing home to them and their families the sufferings which they inflict. Col. Logan, as usual with him, particularly distinguished himself in dealing this last blow on the enemy. It was indeed one of the principal objects of the expedition. Having effected this first highly successful irruption among the north-western Indians from Kentucky, (Colonels Bowman and Logan had headed the very first,) he discharged his volunteer troops at the Ohio, and returned with his own to the Falls. Owing to these offensive measures, Kentucky enjoyed some breathing time, while the Indians were engaged in rebuilding their cabins and obtaining provisions by hunting, to supply the loss of their crops.

By the 1st of November, 1780, the population of the *county* of Kentucky, had advanced with such rapid strides, that the Legislature of Virginia subdivided the county into three different parts by the respective names of *Jefferson*, *Fayette* and *Lincoln*. The former embraced that part of the old *county*, which lay north of the river Kentucky, and north of Green river, and west of Big

Benson and Hammond's creek; the second beginning at the mouth of the Kentucky river, extended up to its middle fork, to the head, and embraced the northern and eastern portions of the present State, on the eastern side of the Kentucky river; the residue of the primitive county was called Lincoln. This increase of counties necessarily gave rise to a proportionate expansion of the civil and military organization; for each county, according to the old constitution of Virginia, required a municipal and military system of its own. For this purpose, *John Floyd* was appointed first Colonel, and William Pope* Lieutenant Colonel; Ben. Logan Colonel, and Stephen Trigg Lieutenant Colonel of Lincoln county; John Todd Colonel, and Dan. Boone Lieutenant Colonel of Fayette county. A commission of "Brigadier General of the forces to be embodied in an expedition westward of the Ohio," was issued to Col. Clark. It is preserved among his papers, under the signature of Thomas Jefferson, and dated January 22d, 1781.

Each of the counties had likewise a court of qualified civil and criminal jurisdiction, as was noticed in regard to the original county of Kentucky. There was no court, however, competent to try capital cases nearer than Richmond, the seat of government of Virginia. Fortunately, owing to the simplicity of manners, the circumscribed wants of the people, together with the equal and rude state of property, there were few temptations to violence requiring the interposition of the criminal law. The first surveyors in the new counties were George May for Jefferson, Col. Thomas Marshall† for Fayette, and James Thompson for Lincoln. The services of the two latter were loudly and, for some time, vainly called for.

The new system of defending the country by the gallant man, whom we now so gladly salute as Gen. Clark, deserves a few words. Spies or scouts were scattered over the frontier, who reported to the General, posted at Fort Nelson, at the Falls of Ohio. To those was added a new galley armed with four-pounders and constructed for plying up and down the river,‡ between the Falls and the mouth of Licking river.‖ This served as a floating fortification; but was too limited in its sphere of duty, and too unsupported by other

* The father of the late William Pope, Senator of Jefferson county.

† The father of the great Chief Justice.

‡ Marshall, I, 120.

‖ The wreck of this galley is said to have produced the formation of the point of Bear Grass creek, just above the present city of Louisville.

galleys adapted to the same purpose, to produce much effect. It is, however, said to have intimidated the Indians, so much as to prevent expeditions across its line of operations. On one occasion it is reported to have stopped a formidable invasion near its upper station. The aversion of the militia to acting in this species of marine service, and the reduction of the regular force, compelled Gen. Clark to lay aside the galley before the close of the year. The plan itself, so novel in the western waters, however, shows the military readiness of the author.

The severity of the winter of 1779—1780 must not be omitted; it was known by the emphatic name of the *Hard Winter*. It affected the wild herds of the forest, driving them, in spite of their instincts, to the habitations of man for sustenance. The distress of the immigrant families was overwhelming; "compelled to encamp and abide the storm, the pains of hunger and cold were inflicted on them in many instances, in a most excruciating degree."* The wild game, as well as the tame cattle, perished; "and it is a fact, that a part of those dead carcasses became the necessary viands of some of the unfortunate and helpless travellers."†

The establishment of Fort Jefferson formerly mentioned provoked an attack upon it by the Chickesaws and Choctaws, in whose lands it had been built, without their consent. A purchase had been positively instructed to be made of the Indians by the governor of Virginia; though the circumstances which prevented it are unknown. In resentment of this threatening intrusion, it is supposed, Colbert, a Scotch gentleman who had ingratiated himself with these Indians, the ancestor of the chiefs of that name, appeared with all his warriors before Fort Jefferon, some time in the summer of 1781. The attack, it is said by one who was a boy in the fort at the time,‡ lasted five days. The Indians principally encamped on the island now known as Island No. 1, just above Mayfield's creek. The garrison did not exceed thirty men, under the command of Capt. George; two thirds of this small number being sick with the fever and ague, reduced the post to the lowest extremity. Pumpkins with the blossom yet upon them, were their principal food. On the 6th day George and Colbert, the Indian chief, met under a flag of truce, to agree upon terms of capitula-

* Idem, I, 102.

† Idem.

‡ Capt. Donne, a well known Falls' pilot, late of Louisville.

tion; they were unable to effect this object; as Colbert was retiring, he received a wound from some of the Indians,* who were with our men in the block houses, and fell. This treachery, according to our *own* usages, enraged the Indians to the utmost pitch of exasperation; and at night they collected all their forces and made a furious assault on the fort, endeavoring to take it by storm. When the Indians had advanced in very close order, Capt. George Owen, who commanded one of the block houses, had the swivels [could these have been the Kaskaskia guns?] loaded with rifle and musket balls, fired into the crowded ranks of the enemy. The consequent carnage was excessive, and the enemy dispersed.

At the same time, Gen. Clark who was stationed at Kaskaskia, and had been sent for, arrived with provisions and a reinforcement which effectually raised the siege to the great relief of the garrison. This fort was some time afterwards abandoned, owing to the difficulty of supplying such remote and detached posts. It is worthy of remark, that the State of Kentucky goaded to madness, as she has been by Indian outrage, submitted to the occupation of the north-western section of her territories by the Chickasaws, until their title was peaceably extinguished by the treaty of the United States, in 1818, with that tribe. The fact presents an exemplary regard for aboriginal rights, which may well dictate a lesson of forbearance with the tribes of the forest to *all* the members of our confederate republic.

* Capt. Patton's Papers.

ARTICLE III.

From the United States Mining Journal.

Mining and Metallurgy of the Ancient.*

THE GOLD MINES OF EL ALLAGA.

"The vast numbers employed in these mines are bound in fetters, and compelled to work day and night without intermission, and without the least hope of escape; for they set over them barbarian soldiers, who speak a foreign language, so that there is no possibility of conciliating them by persuasion, or the kind feelings which result from familiar converse.

"When the earth containing the gold is hard, they soften it by the application of fire, and when it has been reduced to such a state that it yields to moderate labor, several thousands (myriads) of these unfortunate people break it up with iron picks. Over the whole work presides an engineer, who views and selects the stone, and points it out to the laborers. The strongest of them, provided with iron chisels, cleave the marble shining rock by mere force, without any attempt at skill; and in excavating the shaft below ground they follow the direction of the shining stratum without keeping to a straight line.

"In order to see in these dark windings, they fasten lamps to their foreheads, having their bodies painted, sometimes of one and sometimes of another colour, according to the nature of the rock; and as they cut the stone, it falls in masses on the floor, the overseers urging them to the work with commands and blows. They are followed by little boys, who take away the fragments as they fall, and carry them out into the open air. Those who are above thirty years of age are employed to pound pieces of the stone, of certain dimensions, with iron pestles in stone mortars, until reduced to the size of a lentil. The whole is then transferred to women and old men, who put it into mills arranged in a long row, two or three persons being employed at the same mill, and it is ground until reduced to a fine powder.

"No attention is paid to their persons, they have not even a piece of rag to cover themselves, and so wretched is their condition, tha tevery one who witnesses it deplores the excessive misery they endure. No rest, no intermission from toil are given either to the sick or maimed. Neither the weakness of age, nor women's infirmities are regarded—all driven to their work with the lash, till at last, overcome with the intolerable weight of their afflictions, they die in the midst of their toil. So that these unhappy creatures always expect worse to come than what they endure at the present, and long for death as far preferable to life.

* *A popular account of the Ancient Egyptians.* Revised and abridged from his larger work. By Sir J. GARDNER WILKINSON, D. C. L., F. R. Soc., in two volumes. Illustrated with five hundred Engravings. New York: HARPER & BRO.

"At length the masters take the stone thus ground to powder and carry it away to undergo the final process. They spread it upon a broad table a little inclined, and, pouring water upon it, rub the pulverised stone until all the earthy matter is separated, which, flowing away with the water, leaves the heavier particles behind on the board. This operation is often repeated, the stone being rubbed lightly with the hand, they then draw up the useless and earthy substance with fine sponges, gently applied, until the gold comes out quite pure. Other workmen then take it away by weight and measure, and, putting it with a fixed proportion of lead, salt, a little tin, and barley bran, into earthen crucibles, well closed with clay, leave it in a furnace for five successive days and nights, after which it is suffered to cool. The crucibles are then opened, and nothing is found in them but the pure gold, a little diminished in quantity.

"Such is the method of extracting the gold on the confines of Egypt,—the result of so many and such great toils. Nature, indeed, teaches that as gold is obtained with immense labour, so it is kept with difficulty, creating great anxiety, and attended in its use both with pleasure and grief.

The skill and perfection of the Artificers in Gold at that early period, may be judged, from the various articles of use and ornament mentioned in the Bible as being composed of, or overlaid with

GOLD LEAF.

"In the early stages of society, when gold first began to be used, idols, ornaments, or other objects were made of the metal in its pure state, till, being found too soft and too easily worn away, an alloy was added to harden it, at the same time that it increased the bulk of the valuable material. As men advanced in experience, they found that the great ductility of gold enabled them to cover substances of all kinds with thin plates of the metal, giving all the effect of the richness and brilliancy they admired in solid gold ornaments, and the gilding of bronze, stone, silver, and wood, was speedily adopted.

"The leaves so used were at first thick, but skill, resulting from experience, soon showed to what degree of fineness they could be reduced; and we find that in Egypt substances of various kinds were overlaid with fine gold-leaf at a very remote period, even in the time of the first Osirtasen. Some things still continued to be covered with thick leaf, but this was from choice, and not in consequence of any want of skill in the workmen; and in the early age of Thotmes III., they were acquainted with the various methods of overlaying with gold-leaf, gilding, inlaying, and beating gold into other metals, previously tooled with devices to receive it.

"That the practice of applying it in leaf was common when the Israelites were in the country is evident from the direct mention of it in the Bible, the ark of shittim wood made by Moses being over-

laid with pure gold; and the casting of the metal is noticed on the same occasion, nor can we doubt that the art was derived by the Jews from Egypt, or that the Egyptians had long before been acquainted with all those secrets of metallurgy, in which the specimens that remain prove them to have so eminently excelled.

"The method devised by the Egyptians for beating out the leaf is unknown to us, but from the extreme fineness of some of that covering wooden and other ornaments found at Thebes, we may conclude it was done nearly in the same way as formerly in Europe, between parchment; and perhaps some membrane taken from the intestines of animals was also employed by them.

"In Europe the skin of an unborn calf was at first substituted for the parchment previously used, but in the beginning of the 17th century, the German gold-beaters having obtained a fine pellicle from the entrails of cattle, found that they could beat gold much thinner than before, and this still continues to be used, and is known to us under the name of gold-beaters' skin. 'About the year 1621,' says Beckmann, 'Merunne excited general astonishment when he showed that the Parisian gold-beaters could beat an ounce of gold into sixteen hundred leaves, which together covered a surface of one hundred and five square feet. But in 1711, when the pellicles discovered by the Germans came to be used in Paris, Reaumur found that an ounce of gold in the form of a cube, five and a quarter lines at most in length, breadth and thickness, and which covered only a surface of about 27 square lines, could be so extended by the gold-beaters as to cover a surface of more than 1466½ square feet. This extension, therefore, is nearly one half more than was possible about a century before.'

"Many gilt bronze vases, implements of various kinds, trinkets, statues, toys, and other objects, in metal and wood, have been discovered in the tombs of Thebes: the faces of mummies are frequently found overlaid with thick gold-leaf; the painted cloth, the wooden coffin, were also profusely ornamented in this manner, and sometimes the whole body itself of the deceased, previous to its being enveloped in the bandages. Not only were small objects appertaining to the service of the gods, and connected with religion, or articles of luxury and show, in the temples, tombs, or private houses, so decorated; the sculptures on the lofty walls, of an adytum, the ornaments of colossus, the doorways of a temple, and parts of numerous large monuments, were likewise covered with gilding, of which the wooden heifer which served as a sepulchre to the body of King Myeerinus's daughter—some of the mouldings in the temple of Kalabshi in Nubia—the statue of Minerva sent to Cyrene by Amasis—and portions of the Sphinx at the Pyramids—may be cited as instances. Gold is supposed to have been used for money some time before silver. In Egypt it was evidently known before silver, this being called 'White Gold;' and it was there the representative of money; while in Hebrew,

kussuf, 'silver,' signified 'money,' like 'argent' in French. In neither case was the money coined in early times. Gold was perhaps first stamped by the Lydians; but the oldest known Greek coines are the silver ones of Ægina, with a tortoise on one side.

"Much gold was used for ornamental purposes. Its richness, durability, and freedom from tarnish, led the ancients to employ it very generally, and to a greater extent than in modern times, when South America has given us the abundance, and the name of 'plate.' Silver was chiefly confined to money; and the demand for gold in houses (Plin. xxxiii. 17), and in jewellery, left silver free for the currency, and for a few other purposes. But though gold was preferred, it is still singular that so few pieces of silver plate seem to have been made by the Greeks and Romans.

"The Egyptian sculptures represent silver as well as gold vases and ornaments, in the time of the third Thothmes, and silver rings and trinkets have been found of the same epoch; but gold was the favorite metal in Egypt, as afterwards, in Greece and Rome; and the rich frequently had ornamental works, statues, and furniture of solid gold. Those who could not afford them were satisfied to have bronze overlaid with gold, at first with a thick, in after times, with a thin coating, until in time gold-beating brought the external appearance of gold within the reach of less wealthy people; and gold leaf in modern days covers the wooden ornaments of the humblest house. Now that gold is in greater abundance, we may look to its coming again into more general use, instead of silver, which sinks into the appearance of pewter by the side of that rich metal, and to its taking the place of some of our paltry imitations.

"If the use of gold preceded that of silver, the latter was not long in following it; and the earliest authority, the Bible, mentions both at a remote age. Abraham was said to have been 'very rich in cattle, in silver, and in gold;' Abimelech gave him a thousand pieces of the former; and the use of silver as money is distinctly pointed out in the purchase of the field of Ephron, with its cave, which Abraham bought for 'four hundred shekels of silver, current money with the merchant.' On this occasion, as usual, the price paid was settled by weight, which was the origin and meaning of the name shekel; and the custom of weighing money was retained among the Egyptians, Hebrews, and other Eastern people, till a late period. Indeed until a government stamp, or some fixed value, was given to money, this could be the only method of ascertaining the price paid, and of giving satisfaction to both parties. Thus Joseph's brethren, when they discovered the money returned into their sacks, brought it back to Egypt, observing that it was 'in full weight;' and the paintings of Thebes frequently represent persons in the act of weighing gold, on the purchase of articles in the market.

The Antiquity of Coined Money.

"Egyptian money was in rings of gold and silver, a kind of cur-

rency that continues to this day in Sennaar and the neighboring countries; but it is uncertain whether any of them had a government stamp to denote their purity or their value; and though so commonly represented, none have yet been found in the ruins or tombs of Thebes. They remind us of the 'ring (nuzm) of gold' in Job XLII. 11, given him with 'a piece of money' by his friends.

"Gold when brought as a tribute was often in bags. which were deposited in the royal treasury. These doubtless contained gold dust, which is mentioned by Job (xxviii, 6.) as a well-known form of that metal, and this is confirmed by 'pure gold' being written over them. Though sealed, and warranted to contain a certain quantity, they were subjected to the usual ordeal of the scales by the cautious Egyptians. Money was sometimes kept ready weighed in known quantities for certain occasions, which when intended as a present, or where the honesty of a person was beyond suspicion, did not require to be weighed; as when Naaman gave 'two talents of silver in two bags' to Gehazi (2 Kings, v. 23; see Tobit ix, 5,) The Egyptians had also unstamped copper money, called in the papyri 'pieces of brass;' which, like the gold and silver, continued to be taken by weight even in the time of the Ptolemies; and it was only by degrees that the Greek coinage did away with the imperfect system of weighing the price paid for every commodity.

"But these princes were not the first who introduced coined money into Egypt; it had been current there during the Persian occupation of the country; and Aryandes, who was governor of Egypt under Cambyses and Darius, struck silver coins, in imitation of the gold Daries of his sovereign, for which act of presumption he was condemned to death.

"They are supposed to be those with an owl, and the Egyp ian sceptres of Osiris, the crook and flail, on the obverse; and an archer on a hippocampus, with a dolphin, on the reverse.

"The art of stamping money in Asia began in the dominions of Lydia. Herodotus says the Lydians were 'the first people who coined gold and silver for their own use;' and if Ægina claims the earliest coinage, this does not contradict Herodotus, as it was only the earliest in relation to Greece. The oldest coins that have been found are the statars of Lydia, which date only a little before the very ancient ones of Cyzicus. They are not of pure gold, but of Electrum, or three parts of gold and one of silver; probably owing to the two metals having been found together, and first stamped in that state. They were mere lumps, or dumps, of a certain weight; often cracked at the edge from being suddenly flattened by the blow. They were impressed with a lion's head, or other emblem, on one side only. Similarly rude were the old Æginetan coins, with a tortoise on one side, and on the other the mark of the block on which the lump of metal was fixed while struck. These last were all of silver, none of gold; and the oldest kind of real gold were those of Darius.

"Phidon, king of Argos, is said to have invented weights and measures, (that is in Greece,) and to have established the silver coinage of Ægina. B. C. 895: and though Pausanias thinks gold and silver money were unknown in the age of Polydonis, king of Sparta, (who died B. C. 124), the authority of the Parian Chronicle, and of Ælian, favour

the earlier claims of Ægina. The coins of Syracuse and Magna Græcia date from 700 B. C.; having, like all others before 500 B. C. only a figure on one side; and the first silver coins of Athens were struck in 512 B. C. The gold Darics had only a figure on the obverse, representing an archer. They were coined about 500 B. C., and had not yet the round shape of later pieces, nor of the silver Darics, being 5-8ths of an inch long by 7-16ths. They were worth about 1*l.* 1*s.* 10*d.* each. These and other early coins therefore do not borrow their form from ring money, which may perhaps be traced in those of China.

"Habit would naturally retain an original type for a long time; and sometimes even in Greece the archaic character of a coin was continued long after art had improved. Thus the old head of Minerva was repeated on the late Athenian drachm and tetra drachm, because strangers were accustomed to it in commerce, and the Athenians were satisfied to use the well known Corinthian didrachm for the same reason, as all people on the Mediterranean still welcome the pillar dollar of Spain.

"The tradition of pecunia being called from pecus, and of the ox or sheep having been at first a substitute for moneys as in Greece and Rome, accords with a custom still common among some people, of making them the standard of valuation; in Darfeor and Kordofan a piece of cotton cloth is reckoned equal to a sheep, and in Job (X, II. 11), the name Kesiteh (or 'lamb') is employed to signify a piece of money. Homer also reckons the value of certain things as equal to an ox; and in Solon's time a sheep was equivalent to a bushel and a half of corn.

"If stamped money was not used by the ancient Egyptians we have evidence of weights and measures having been invented by them long before the Greeks existed as a nation: and it is probable that they were known even in Greece previous to the time of Phidon.

"One kind of balance used for weighing gold differed slightly from those of ordinary construction, and was probably more delicately formed. It was made, as usual, with an upright pole, rising from a broad base or stand, and a cross beam turning on a pin at its summit; but instead of strings suspending the scales, was an arm on either side, terminating in a hook, to which the gold was attached in small bags.

"Large scales were generally a flat wooden board with four ropes attached to a ring at the extremity of the beam; and those of smaller size were of bronze, one and a half inch in diameter, pierced near the edge in three places for the strings.

"The principle of the common balance was simple and ingenious; the beam passed through a ring suspended from a horizontal rod, immediately above and parallel to it, and when equally balanced, the ring, which was large enough to allow the beam to play freely, showed when the scales were equally poised, and had the additional effect of preventing the beam tilting, when the goods were taken out of one, and the weights suffered to remain in the other scale. To the lower part of the ring a small plummet was fixed, and this being touched by the hand, and found to hang freely, indicted, without the necessity of looking at the beam, that the weight was just. The figure of a baboon was sometimes placed upon the top, as the emblem of the god

Thoth, the regulator of measures, of time, and of writing, in his character of the moon; but there is no appearance of the goddess of Justice being connected with the balance, except in the judgment scenes of the dead.

"The pair of scales was the ordinary and, apparently, only kind of balance used by the Egyptians; no instance of the steel-yard being met with in the paintings of Thebes, or of Benī Hasan; and the introduction of the latter is confined to a Roman era.

"The Egyptians had another kind of balance, in which the equalization of the oposite weights was ascertained by the plummet; and this last, whose invention has been ascribed by Pliny to Dœdalus, is shown to have been known and applied in Egypt at least as early as the time of the Osirtasens.

Copper and Iron.

"For ordinary purposes copper was most commonly used; arms, vases, statues, instruments, and implements of every kind, articles of furniture, and numerous other objects, were made of this metal hardened by an alloy of tin, and even chisels for cutting stone, as well as carpenter's tools, and knives were of bronze. It is generally allowed that copper or bronze was known long before iron, and though Tubal Cain is said to have been 'the instructor of every artificer in brass and iron,' no direct mention is made of iron arms or tools till after the Exodus.

"According to the Arundelian marbles, iron was known one hundred and eighty-eight years before the Trojan war, about 1370 years B. C., but Hesiod, Plutarch, and others limit its discovery to a much later period, after the capture of Troy. Homer, however, distinctly mentions its use* and that there is little reason to doubt the sideros of the poet being iron, is shown by the simile, derived from the quenching of iron in water: which he applies to the hissing noise produced on piercing the eye of Polyphemus with the pointed stake, thus rendered by Pope:—

> "And as when armourers temper in the ford
> The keen-edged poleaxe, or the shining sword,
> The red hot metal hisses in the lake,
> Thus in his eyeball hiss'd the plunging stake."

"His 'black kyanus' is also thought tobe steel, as well as the adamas of Hesiod, who mentions the iron of the Idaei Dactyli in Crete; and the skill of the Chalybes in its manufacture, dates from a very remote age. Among the earliest authorities for the use of iron may be cited the bedstead of Og, King of Bashan, who is said to have lived about the year 1450 before our era; and Thrasyllus agrees with the Arundelian marbles in supposing iron to have been known before the Trojan war, or, indeed, one hundred and fourteen years previous to the foundation of Troy, 1537 before our era. On the other hand, it has been argued, that offerings of iron in the temples of Greece distinctly showed the value attached to that metal, as well as its limited use for ordinary purposes, and rings of iron were worn by the ancients, some of which have been found in the tombs of Epypt. But these last are of very late date, long after iron was commonly used, and I possess one of them, engraved with the figure of Harpocrates, which is of a

* Hom. Iliad. XXIII., 261, &c.

Ptolemaic, or rather of a Roman era, and which only claims some degree of interest from its bearing a device noticed by Pliny as becoming fashionable at Rome in his time.

"That iron, as early as the days of Lycurgus, was held in little estimation, is shown by that legislator forbidding the introduction of gold and silver in his republic, and restricting the Spartans to the use of iron; and some notion may be formed of its value at that time by the assertion of Plutarch that it required a cart drawn by two oxen to carry the small sum of ten miriæ.

"The Jews apppear to have been acquainted with two kinds of iron previous to the Babylonish captivity, the barzel, which was in common use, and the northern iron, as well as steel; even as early as the days of Job iron was known; and Moses mentions an iron furnace.

"One of the arguments against the early use of iron is the difficulty of smelting the ore, and of reducing it to a malleable state; and the various processes required to discover all its most useful properties render it less likely to be employed than a more ductile metal. Gold, silver, and copper were easily fused, and a single process sufficed to make them available for every purpose, the principal art required for fabricating implements of copper depending on the proper proportions and qualities of alloy introduced.

"In the infancy of the arts and sciences, the difficulty of working iron might long withhold the secret of its superiority over copper and bronze; but it cannot reasonablo be supposed that a nation so advanced and so eminently skilled in the art of working metals as the Egyptians and Sidonians, should have remained ignorant of its use, even if we had no evidence of its having been known to the Greeks and other people; and the constant employment of bronze arms and implements is not a sufficient argument against their knowledge of iron, since we find the Greeks and Ramans made the same things of bronze long after the period when iron was universally known.

"Another argument to show that bronze was used in Greece before iron is derived from the word 'coppersmith,' having, in Greek, the signification of 'smith,' whether applied to a worker of copper or iron. In Latin, on the contrary, ferrum, 'an iron,' is a word frequently applied to a sword, and some have since argued the use of iron for those weapons at the earliest period among the Romans, which is confirmed by the treaty imposed upon them by Porsena, binding them not to use iron, except for agricultural implements. But long after iron was used by them, the Romans and Etruscans continued to make swords, daggers, spearheads, and other offensive weapons of bronze, as well as their defensive armour; and the discovery of arms and tools of bronze ceases to argue an ignorance of iron.

"To conclude, from the want of iron inrtruments, or arms, bearing the names of early monarchs of a Pharaonic age, that bronze was alone used, is neither just nor satisfactory, since the decomposition of that metal, especially when buried for ages in the nitrous soil of Egypt, is so speedy as to preclude the possibility of its preservation. Until we know in what manner the Egyptians employed bronze tools for cutting stone, the discovery of them affords no additional light, nor even argument, since the Greeks and Romans continued to make bronze instruments of various kinds so long after iron was known to

them; and Herodotus mentions the iron tools used by the builders of the Pyramids.

"Iron and copper mines are found in the Egyptian desert, which were worked in old times; and the monuments of Thebes, and even the tombs about Memphis, dating more than 4000 years ago, represent butchers sharpening their knives on a round bar of metal attached to their apron, which, from its blue color, can only be steel; and the distinction between bronze and iron weapons in the tombs of Remeses III., one painted red, the other blue, leaves no doubt of both having been used (as in Rome) at the same period. In Ethiopia iron was much more abundant than in Egypt, and Herodotus states that copper was a rare metal there, though we may doubt his assertion of prisoners in that country having been bound with fetters of gold.

"The speedy decomposition of iron would be sufficient to prevent our finding implements of that metal of an early period, and the greater opportunities of obtaining copper ore, added to the facility of working it, might be a reason for preferring the latter whenever it answered the purpose instead of iron. Bronze tools might also be made available for sculpturing and engraving stone; though there is great difficulty in accounting for their use in mines and quarries, where the stone was frequently hewn with them, as Agatharchides informs us in his account of the gold mines, and as was evidently done in cutting the lime stone rock of the tombs of Thebes, a bronze chisel having been found amidst the chippings of the stone, where it had been accidentally left by the workmen.

"The hieroglyphics on obelisks and other granitic monuments are sculptured with a minuteness and finish which is surprising, even if they had used steel as highly tempered as our own.

"Some are cut to the depth of more than two inches, the edges and all the most minute parts of in taglio presenting the same sharpness and accuracy; and I have seen the figure of a king in high relief, reposing on the lid of a granite coffin, which was raised to the hight of nine inches above the level of the surface. What can be said, if we deny to men who executed such works as these, the aid of steel, and confine them to bronze implements? Then, indeed, we exalt their skill in metallurgy far beyond our own, and indirectly confess that they had devised a method of sculpturing stone of which we are ignorant. In vain should we attempt to render copper, by the addition of certain alloys, sufficiently hard to sculpture granite, basalt, and stones of similar quality. No one who has tried to perforate or cut a block of Egyptian granite will scruple to acknowledge that our best steel tools are turned in a very short time, and require to be re-tempered; and the labor experienced by the French engineers, who removed the obelisk of Luxor from Thebes, in cutting a space less than two feet deep along the face of its partially decomposed pedestal, suffices to show that, even with our excellent modern implements, we find considerable diffidulty in doing what to the Egyptians woold have been one of the least arduous tasks. The use of tools on granite is thus described by Sir R. Westmacott:

"Granite, as most hard materials of that nature, being generally worked with a pick of various strength, until reduced to a surface, the duration of the tool depends on its form; the more obtuse, the

longer it will work, remaining longer cold. In jumping, (as it is termed) holes for the admission of bolts into fractured parts of granite the tools are usually of strong tempered iron, about three quarters of an inch in diameter, which resist the heat sometimes half an hour, seldom longer ; one man holds and turns, or moves the tool, whilst the other strikes it with a heavy hammer, the whole being supplied with water. Tools of less diameter are formed of steel, but these will not resist more than 300 strokes, when the points fly, and require to be fresh battered. Sculptors generally use tools formed of blistered steel, the finer sort highly tempered by immersing them, when heated to a proper degree, into cold water."

"Some have imagined that the granite, being somewhat softer at the time it is taken from the quarry, was more easily sculptured when the Egyptians put up the obelisks than at present, and thus satisfy themselves that the labor was considerably less ; but this argument is entirely overthrown by the fact of other sculptures having been frequently added, one hundred, and one hundred and fifty years after the erection of a monument, as in the lateral lines of hieroglyphics on obelisks, which are sometimes found more deeply cut and more beautifully executed than those previously sculptured, others have suggested that the stone being stunned, as it is termed in those places where it was to be sculptured, yielded more readily to the blow of the chisel ; but neither is this sufficient to produce the effect proposed, nor an advantage, exclusively enjoyed by the ancient Egyptians.

"Thus, then, the facility they possessed in sculpturing granite is neither attributable to any process for bruising the crystals, or to its softer state on coming from the quarry, and we have still to discover the means."

Article IV.

Sketches of Peru.—From the Exploration of Lieut. Gibbon.

Tarma—Quichua Indians—Industrial Pursuits—Amusements—Manners and Customs of the Peruvians—Inca road—Wool growing—Trade—Snow mountains—Silence of the Andes—Harvesting—Juaga Valley and Town—Longevity—Affection of Animals—Remains of an Ancient City—Goitre—New World camels: Llama-huanaco—Alpaca—Huancavelica—Quicksilver mines of Santa Barbara—Romping games.

Tarma, a small town in Peru, by alpha and beta, Centauri, in latitude 11° 25′ south, is situated in a rich, well-cultivated, narrow valley, between the Andes range of mountains on the east, and the lofty Cordillera chain on the west.

On the 9th of July, 1851, the writer turned southeast, accompanied by Henry C. Richards, a native of Virginia, in the United States, and José Casas, of Spanish descent, native of Peru.

A volunteer mestizo, Arriero, with his little son, drove a train of mules which carried the baggage.

Our path was shaded by willow trees, and the way obstructed with droves of llamas, loaded with rock salt from mines in the neighborhood.

The leaves of the trees seemed calling for water, while the temperature of the air, at mid-day, in the shade, was 68° Fahrenheit. Peach and apple-tree leaves doubled up, showing both their edges to the sun; the fruit is small, oblong, and unthrifty-looking.

The ravine through which we ascend is thickly populated with Quichua Indians. Their houses are built of stone and mud, and thatched with coarse mountain grasses.

The natives are busily employed gathering in the harvest of maize, which is small-grained and of four colors, red, white, yellow, and blue. It is of excellent quality, generally used as food, roasted or parched.

Potatoes, of which there are numerous varieties, are also now gathered; they grow in perfection, though much smaller than their descendants in the United States.

The little estates—chacrás—are owned by descendants of Spaniards, Indians, or Mestizos, the latter a cross between the two former.

In almost all cases the cultivation of the soil is performed by the aborigines, at wages from ten to twenty cents a day.

As we rise above the foliage, the mountain tops begin to look wild and barren, with rocks and white clay; below we have a beautiful view of the town of Tarma, amidst its green trees and pasture fields. My mulè, Rose, pants for breath; she is so fat and plump that the climbing troubles her.

On the mountain-side is seated a fine looking Indian, blowing a semicircular shaped trumpet, made of a number of cow's horns, stripped one into the other, with the joints sealed; he don't seem to be so particular as to the tune, as he does to the distance he may be heard, and he makes the valley ring. José thinks he is trying to blow up a wedding with a fair one among the flowers below. The Indians celebrate harvest-time with merry-making. Their meals are cooked in the fields, where their kitchen utensils are carried. They have music and dancing in the barley stubble. It is amusing to see these happy people enjoying themselves in the open air. As we pass, the reapers are seated near the road, in a barley field, at dinner, upon the ground, in rows one behind another, laughing and talking among themselves. When we meet them they are very civil, modest and unassuming in manners. The men carry enormous loads of barley or wheat on their backs, while the women drive the loaded ass, and sling the children over their own shoulders. Their horses, mules, sheep, horned cattle, pigs, and dogs, are all admitted, together with the family, into the harvest field; while the father reaps, and the mother gathers, the boys tend

the flocks, and the older girls take care of the babies and do the cooking, while at the same time they spin woollen yarn by hand, for stockings. One of them offered a pair for sale at twenty-five cents, which were nearly long enough for trowsers. They are always employed, go to bed early, and rise before the sun, as their Incas taught them to do.

At the top of the mountain, not a house or tree was to be seen, and no sign of cultivation. On tufts of coarse mountain grass, a flock of sheep were grazing; some of them merinos, and of good size. Their wool is sent to Lima, where it is sold, to be exported around Cape Horn, to the manufacturers in the North.

To the east is a snow-peaked mountain, and as the moon rises, as if from the Atlantic ocean, we are followed by a cold north wind. The sky is clear and of a deep blue. On our left we see the remains of an ancient Peruvian road, used in the times of the Incas. It is said that *good* roads are marks of civilization; could my mule, Rose, give her opinion, she would certainly decide in favor of the Inca road, in preference to those found in Peru at the present time. These remains show a width of thirty feet of rock pavement, with well placed curbstones on each side. Where the road has considerable inclination, rows of stone are placed across, higher than the general level of the pavement, so that it appears like a stair-way on the side of a hill. That it was not a coach road is no argument against it; it was before the horse, the ass, or the cow were introduced into South America from Europe. It was constructed for the Indian and his llama, the surest of the sure-footed, and, therefore, the improvement speaks well for the civilization of those times of which we have but a traditionary record.

Passing over a plain on the mountain top, there was a cistern by the side of our path, where water is caught during the rainy season to supply the thirsty in the dry. The rainy season commences here about the middle of September—sometimes later—and lasts six months. The remainder of the year is dry.

Night had overtaken us where not a leaving thing was to be seen, except a black eagle, returning to its roosting-place under overhanging rocks, on the west side of a lofty peak. Our little tent was pitched; the package piled up and covered at the door; the mules let free for the night to feed upon the mountain grass around us. A fire was kindled, and water from a small spring heated, and tea was made. José produced bread and cheese from his saddle-wallets; placed them upon a clean cloth over a trunk; looking into the tent, he says, very slowly, "*Senor! La hora de cenar*," (Sir, it is the supper hour.) Both men and beasts seem tired; we have ascended all day. The first day's travel is always the most harassing. Our arriero, Francisco, a mestizo, is a small, slim built man, with respectful manners; he and his little son Ignacio keep watch by turns over the mules. The little boy is

out while his father gets supper. The night was clear and cold; the moon shining brightly. The world is not so silent in the middle of the ocean. I do not think I heard anything; I almost listened to hear the globe turn upon its axis. Long after the people were asleep, I heard little Ignacio singing to himself, wrapped up in his homespun poncho, as he follows the mules.

At daylight in the morning we found heavy frosts and ice about us, with thermometer 24°, and wet bulb 30°. The mules were loaded; breakfast over; observations made; and we off, soon after sunrise. This is the way to travel at an elevation where we find no inhabitants.

The mountains are becoming more rounding, and covered with a fine sort of grass. Shepherdesses are following thousands of sheep and lambs. The girls spin wool and chat together, while the dogs follow lazily after. If we pass close to the flock, and the sheep run back, these dogs make a furious attack upon us, keeping between us and the flock. The temperature of a spring of excellent water near the path was 48°. To the southeast snow peaks stand up in full view. The day is warm and pleasant. Here comes a cheerful party of ladies and gentlemen on horseback. As we pass each other, the gentlemen take off their hats, and the ladies look prettily under their white straw ones. Their figures show to advantage in riding-dresses, and they manage and set their horses well. The cool mountain air gives them a fresh color, which contrasts well with gazelle-eyed beauty and long black hair. I thought their dresses rather short, but a sight of the foot of one of them, small as it was, reminds one there is proof positive against the propriety of a man's travelling through this world alone.

Now we meet the market Indian driving asses loaded with potatoes, corn, and saddles of mutton, to Tarma. I wanted some mutton for the party, but José was positively refused by an old woman, who got out of his way by twisting the tail of her donkey, who was disposed to come to a stand and be relieved of his load. I was told Indians scarcely ever sell except after they arrive in the plaza. I can account for it by the woman's wanting to go to town, for José offered her more than the market price.

At the end of a thickly populated valley, which stretches off to the southeast, we halted at an Indian hut for dinner. The wife was at home with her children—fine, healthy-looking little ones. Boiled mutton, potatoes, and eggs, with good wheat bread, were placed upon the ground at the door. The children and dogs formed an outside circle around us. After dinner the woman gave me an orange, which she said came from the woods, pointing to the Andes, to the east of us. Some of these Indians cross the range of mountains, and garden on the eastern slopes for the markets, on these table lands—*Puna*—as the Spaniards call the elevated flats.

The husband was threshing barley with his neighbours. The grain is separated from the straw by the tramping of oxen and horses. Over the surface of this level valley there are numbers of such threshing parties. The grain is cleared from the chaff by being poured from the top of a man's head on a windy day. Many of them suffer with inflamed eyes, and even lose them sometimes by a shift of wind, which blows the barley beards into the eyes.

Black cattle are numerous here, and at the foot of the mountains; so are white churches, which stand in the midst of a thick population of Indians. We met a number of tax-gatherers, going among the threshers, with silver-headed canes, receiving a measure of grain instead of contribution-money. They are old Indians, very well dressed, with a respectable, quaker-like air about them; broad-brimmed hats and standing collars. It is an active time also with the priests, who go abroad among the farmers for tithes. The valley is all activity, and merry are the people. Women are visiting about from place to place, astride of plump little jackasses. This is a plentiful season.

When the crops fail on these table lands, the suffering among the Indians is very great. Seeding time is in September, just before the rains commence. If there are hard frosts in February, the chances are that a famine follows.

Crossing a small ridge on the east, we came in full view of the great valley of Juaja, stretching away south. The snowy peaks are represented in a sketch from our camp near the town.

José's wife and children came to the tent, brought *us* supper, and lucerne for our mules. One of the sons, a fine looking boy of eighteen, volunteered to go with me. José desired that I should let him go, and I had no objection; but when his mother came to ask me if I was not satisfied to take her husband without taking her son and only protector, I referred José and her son to her. She settled the case her own way, and gave me her blessing.

Juaja has a population of about 2,500 inhabitants. I say *about*, because there is no such thing as a census known at this elevation. The houses are built one story, of adobe walls, or of unburnt bricks, and tile roofs. The streets are well paved, and run at right angles with each other. A pretty little white-washed church stands upon the plaza, where the women sell their marketing and say their prayers. The Indians come to market and church at the same time; Sunday morning is the great market day. A drove of horses are most miserable-looking little rats; the horses of the lowlands and coasts are much their superiors.

Men live to a good old age in this climate; 70, 80, and 90 years are common; some have arrived at 120 and 130. I am under the impression that the Indians live longest. Mestizo and Spanish Creole girls have been known to bear children at 8 and 9 years of age.

The Spanish Creole population is small; they are generally shopkeepers, the only dealers in foreign goods, which are retailed to the Indians at enormous profits. They travel to Lima and purchase goods, which they use as an inducement to the Indians to work the silver mines, existing three leagues to the east of Juaja, in the Andes range, but which at present are little worked. The Indians prefer blue, in their dresses, to any other color, and consume considerable quantities of indigo. The demand for wax in the churches is of some account. Eggs and wool are the principal exports to Lima, and are carried over the Cordilleras on the backs of jackasses. Travellers do not know why they meet with so many bad eggs at breakfast in Lima. It is customary to pass them round the country as current money or coin for some time before they are sent to the coast to be eaten. Mrs. José says, three eggs will buy her a glass of brandy, or sixpence worth of anything in market. The carrying trade is superintended by the Indians.

The mestizos are shoemakers, blacksmiths, and saddlers. They seem fond of music and dancing, and assume the pride of a superior, and lord it over the honest Indian.

Our road lies through a rich valley, often four miles wide, and level as a floor. The mountains on both sides are dry and unproductive, except in the ravines. The half-yearly displacement of earth is very great; during the rainy season the mountain torrents come down from the summit loaded with soil. The decrease in the size of the mountains from the time of their creation to the present day, and the filling up of this basin, naturally leads one to wonder, whether the present valley was not once a lake. The Juaja river, which takes its rise in Lake Chinchaycocha to the north of Tarma, flows sluggishly and serpent like through the whole length of the valley, and creeping through the Andes, suddenly rushes off at a rapid rate, as though sensible of its long journey, by the Ucayali and Amazon, to the Atlantic ocean. The bed of the river is half a mile wide, and in the wet season is probably eighteen feet deep. There is very little water in it now. The banks break down perpendicularly. The growth of small trees and flowers gives a fresh appearance to the valley, but the sun is very warm as we pace along the dusty road. The apple trees are about the size of raspberry bushes.

There are few varieties of birds in the valley; some pigeons and doves keep the table pretty well supplied. Little Ignacio takes great interest in the sport, and his sharp eyes are constantly on the look-out for a shot. By the river snipe are found; among the flowers, the humming bird is seen and heard.

The road crosses a number of dry beds, streams of considerable size in the rainy season. There is only water enough, at present, for the washwomen, whose soap-suds spoil the water for our beasts. We pass through the village of San Lorenzo, and the small town of Concepcion. A death-like silence pervades these places; the

people are in the fields, except some creoles, seated among the flowers in their neat little court yards. The streets are narrow, and the houses small. All the towns of the Puna are built pretty much after the same fashion, and of the same material; the only difference in their outward appearance being produced by the cultivation of foliage and flowers, where the soil and climate permit. When this is not the case, the town presents a stupid, uninteresting aspect. Children, dogs, and pigs, earthen pots, and beds of straw, surround a smoking fire on the ground floor of a one-roomed house. The smoke escapes through the door-way; the only opening for light or a change of air. During storms, or at night, the door is closed. One peep inside satisfies the North American he can find no rest *there*. But here, in the valley, the cooking is done under the trees, and the inmates of the house wander out in the shade. We have often noticed expressions of friendship between children and dogs; the latter shows his pleasure by wagging its tail, while the smiling child pulls his ears. The pig is the most restless creature at this height. While by himself, he is seen tossing up the bottom of the valley; when he sees the child and dog together, he gives a corkscrew motion to his tail, jumps and swings his body about with an inviting grunt to play. Before long he is laying on his side, with the child on top of him, while the dog is pawing and snapping at that laughable twist of the tail. The affection the different species of animals have, in these associations, is remarkable. The dog in any other place will sometimes kill and eat the sheep; here, he protects it by night and by day. The pig forms an attachment to the jackass, who leaves it, at this season of the year, for the female of its own kind. The ram becomes intimate with a horse or a bull, and it is with difficulty they can be separated. The lamb follows the Indian girl in direct disobedience of its mother's call. Domestic cats are few. They cannot live on high elevations.

There is no part of Peru which is more densely populated than the valley of Juaja. There, close under the mountains, on the east side stands the town of Ocopa, with its convents and schools. From that place, missionaries have branched off in different directions to the forests in the east, at great risk of life and loss of all its comforts, to teach the savage red man how to change his manners, customs, and belief. Some have succeeded, others have failed, and were murdered or driven back by the battle-axe; their settlements destroyed by fire, and years of labor lost; yet some never tire!

Ignacio carries our tent pole across the pummel of his saddle. His thirsty mule ran between two others, loaded with baggage. The boy was swept off and dropped over the creature's heels in the middle of the stream. He regained his saddle in a short time. His father laughed at him, and took the pole himself.

In the centre of the valley are the remains of an ancient city;

the ruins of stone walls were 12 feet high, and from 1 to 1½ foot thick. Those of the present day are generally adobe, from 3 to 4 feet thick. Some of the buildings have been round; others oblong, but generally square, 12 by 18 feet. The round ones are largest and best situated. The streets very irregular and narrow; no appearance of plaza, or church. The ruins extend half a mile north and south, and 200 yards east and west, on a knoll, which may have been an island before the Inca road was built, now hedged in on both sides with cactus. As the land about this ancient city is now cultivated as a corn-field, no remains of curious things could be found. The mason work is very rough, but remains of mortar are there. How the houses were roofed is doubtful, but by the slanting down on the inner sides of the stones of those houses which were round, the mason work may have been carried up till it met at a point, which would give the house a sugar-loaf shape. Besides door-ways, there were window openings. * * *

Marks of small-pox are seen among the people; but there are no chills and fevers here. Some of the women have dreadful swellings in their necks, called by them "*cota*," or goitre, caused by drinking bad water, or snow-water deprived of salts. But why this disease is generally confined to the women I cannot say, unless the men never drink water. It was very certain, from the noise after church, that they find something stronger. I do not think the people are generally dissipated, except on Sunday afternoons, when both sexes seem disposed to frolic. During the week they are otherwise employed.

Leaving the Juaja valley, we passed through a rough, hilly country. In barley stubbles ewes are giving lambs.

A woman planting beans after the plough, has her baby slung over her shoulders; by the noise it made, I doubt its partiality to beans. The plough is drawn by oxen, yoked by the horns. It is made of two pieces of wood — the handle and coulter are of one piece, into which is jointed the beam; the coulter is shod with a square plate, without a shear, so that the furrow is made by throwing the soil on both sides, like the North Carolina bull tongue. On a hill some Indians are planting, while others are carrying up water in large jars from a stream for the purpose of irrigating the vegetables peeping out of the ground.

Some of the Indians on the road look very sad after their Sunday frolic. A man on horseback, with his wife astride behind him, and her baby slung to her back, looked quite as uncomfortable as his miserable little horse. The road is marked with stones at every league of three miles: some of the measures must have been made on a Monday morning after a frolic. The small towns of Guayocachi and Nahuinpacyo are inhabited solely by Indians, and have a ruinous appearance. The streets are pasture-grounds, and decayed old houses serve as roosting-places for buzzards. We had

thunder, rain, and hail; the hail-stones as large as peas, and soft, like snow-balls. Lightning flashed all around us in the valley, while the black clouds brought up by the southeast winds were hurried back by a heavy northwest squall. Thermometer 45°. * * *

The llama is pasturing and giving birth to its young close under the perpetual snow line. The alpaca and huanacos — species of the llama—are in numbers also. Llamas occupy the useful position among the aboriginal race of South America, that the cameel does to the wandering man in Arabia. These animals carry loads of one hundred pounds, over roads too dangerous for the mule or the ass, and climb mountains difficult for man. They are principally used for conveying silver from the mines. The Indians are very fond of them; though they drive them with a whip, it is seldom used; when one lags behind or lies down on the road, the Indian talks to it, and persuades it to forget its fatigues and get up again. They hang little bells about their graceful necks, and decorate the tips of their ears with bits of colored ribbon. Their disposition, like those of their masters, are gentle and inoffensive, except when too much hurried; then they cast saliva at the Indians, or at each other; this is their only offence; it is thought to be poisonous. They require very little food, which they pick up on the mountains, and are much more temperate than their drivers; they require very little water. Their loads are taken off at mid-day, so that they may feed. I am told that they never eat at night. They seek the cold regions of the Andes; nature has provided them with a warm fleece of wool, and they need no shelter. Though they are feeble animals, their usual daily travel is about 15 miles; but after three or four days journey, they must have rest or they perish on the road. The motion of the head and neck as they cross the mountain crags may be likened to that of the swan, as it floats over smooth water. The wool makes good coarse cloth, of various colors, seldom all of one color. The huanaco is known by its being rather larger than the llama; it is said to be difficult to train, even if taken young. It never gives up its ideas of liberty, and will regain its companions whenever an opportunity admits.

The alpaca is the smallest, with the finest long wool; its body resembles the sheep, with the head and neck of the llama. José tells me they are good to eat, but like the others the meat is not very palatable. The alpaca wool is well known in the markets; the Indians make clothing of it, and trade it off on the coast. In this department, and further south, great numbers of these new world camels are raised. It has been remarked that they seek the south side of the mountains; probably there is less evaporation than on the north side, and the pasture is more fresh and inviting. Barley is generally raised on the north side of the mountain.

The town of Huancavelica has a population of about 8,000, and is situated in a deep ravine, amidst a cluster of lofty peaks. It is the capital of the department, and was named by the Incas. The

ravine runs east and west, with an average width of one mile. A small stream flows through it to the east. Thermal springs, of 82° Fahrenheit, found in the vicinity. The town is divided into two parishes; counts six churches, a hospital, and college for young men, in which physics, chemistry, and mineralogy are taught. The plaza is adorned with a fountain of stone. A cathedral stands by the side of the mountain of Cinnebar, which contains the celebrated quicksilver mines of Santa Barbara. Climbing up this mountain, we came to a door-way 15 feet high and 12 wide, carved in the sand-stone. The entrance on the southwest side of the peak was like a railroad tunnel. The eternal glaciers are at this door-way. Icicles hung overhead, and sheets of ice spread under our feet. Sooty-faced, rough-looking Indians trundled wheelbarrows loaded with quicksilver ore. As the *administrador*, a tall, small-pox-marked mestizo, said to me—We are all ready, sir, to escort you through the mines of Huancavelica—I felt as though he was going to say, to be buried alive. We entered this dark hole, about 600 feet below the top of the mountain. As we left daylight, I thought of home; then I heard a dreadful crash, which the mestizo informed me was the upper part of the mine falling in. A hollow sound was followed by a splash in the deep waters somewhere below; then came suddenly a strong smell of sulphuret of arsenic. A little further on I saw a pair of eyes through the darkness. I called to Richards to hold his torchlight; we were travelling east-northeast by my compass; the eyes belonged to a little Indian boy standing on the side of the mine, with a load of ore on his back, while we passed; he had come through a narrow passage called "Take off your horns," on his hands and knees, and had raised a chocking dust. After refreshing ourselves at a spring of water of 50° temperature, we passed into a plaza, where the market women sell to those men who seldom leave the mines. On one side of this plaza, by holding the torches over our heads, we see a beautiful bridge, and beyond it a stairway leading into utter darkness; on the other side a lake—the opposite shore not in sight, though the sound of a hammer floats over its smooth water. As we move along among red brick-colored columns, which support the immense weight overhead, we see a dim torch by the side of the workman, seated with his hammer and chisel, cutting away and honey combing the Andes. The *administrador* tells me we are half way through; if I wish to climb up stairs, we can get near the peak. Turn which way we will, we find a road to travel. I told him to be pleased to keep as near a level as possible. He halted, and after some words to the Indian guide, he said he had taken the wrong road, and must go back some distance. After bumping our heads, and walking doubled up in a most tiresome position, with great want of fresh air, we finally stood up in the San Rosario church, which is rotundo-shaped, with a height of 100 feet to the ceiling. Over the altar was carved, in solid cinnebar, the

Virgin Mary, with the Infant in her arms. As the Indians pass, with hat in hand, they turn, and, kneeling under their heavy loads of ore, say a short prayer, cross themselves, and pass on by the light always burning at the altar. The laboring Indian, who seldom leaves these dark regions, attends when the church bell calls, and offers up prayer for protection from the danger of the mine. On a Sunday evening, in this rotundo, he meets his countrymen, who work on the opposite side of the lake; they tell of seeing daylight at the point of the chisel overhead, instead of driving it farther towards the bowels of the earth.

After a walk of two hours we came into the fresh air on the north side of the mountain. The Cinnebar is so narrowly separated by layers of sandstone, that the peak may almost be called a solid mass of quicksilver ore. At present there are 120 Indian men, women, and boys employed in extracting the metal. Those who cut out the ore work very much as they please — that is, they cut without compass; this makes it dangerous to those inside, the proper supports being cut away by the ignorant Indian. The ore is carried out at both sides of the peak, in bags of raw hide, slung over the backs of the boys, and then wheeled to the furnaces near by, where men break it up into bits, and women make small cakes of the dust. These cakes are laid in the bottom of a large iron grate, sufficiently open to allow heat to pass, and over them the ore is filled in to the depth of three feet. A fire is made underneath of coarse mountain grass; a strong draught carries the vapor from the heated cinnebar, through a retort of earthen pipes, slipped one into the other, to a distance of five or six feet, where it condenses, and the quicksilver lodges in the floor. After the ore becomes well heated, which generally takes eight or ten hours, the doors of the furnace are closed, and, for three or four hours, the destillation continues. After this the quicksilver is swept into pots, washed in water, and dried, when it is ready for the market, and is sold here at one dollar per pound. It is sent off in all directions to the silver mines of Peru.

By the rude method of mining and smelting, the loss of mercury is great. The joints of the earthen pipes are luted with clay, through which the vapor escapes before it has time to condense. It is difficult to regulate the heat by the dry mountain grass, which blazes up and passes away in a moment, so that the doors must be kept open, and a man constantly feeding the fire.

The mine is owned by the government, and leased to a company, who keep secret its annual yield. The laborers' wages are never more than fifty cents a day. They are supplied by the company with all they require from the shop—a sort of purser's store-room—altogether a profitable business for the company. It often happens that when the day of reckoning comes, the laborer is in debt on the books of his employer; he is then obliged to return to the mine and work.

Cinnebar is said to be found the distance of ten leagues, in all directions, from Santa Barbara, and that the Incas knew of and made use of it. Remains of small ovens, in the shape of retorts, have been discovered. The Indians used it to paint their faces.

The only account found of the annual yield of this celebrated mine

was from 1570 to 1790; during this 220 years, Santa Barbara produced 1,040,469 quintals (100 pounds) of quicksilver, or an average of 47,294 pounds per annum. The price during this period varied from fifty to one hundred dollars per quintal, according to the tariff of prices fixed by the Spanish crown.

Huancavelica is on the inland route between Lima and Cuzco, distant from the former 73 leagues. This, although not the shortest distance to the coast, is yet the best road at the present day, leading to the best seaport. Of this immense mass of cinnebar, not a pound is exported. England finds a market for other quicksilver in the silver mines of Peru; carried in iron jars around Cape Horn at great expense, it is transported on the backs of mules, almost by the very mouth of Santa Barbara. The roads are very narrow and rough; it would be impossible to draw a piece of artillery over them in their present condition; a piano was brought from Lima to Huancavelica, and remains cracked to this time, though the house containing it is the centre of gayety and attraction; the owner expects the music of "The last rose of summer" by the next train of mules. Cargoes arrive from Lima in ten days; mail-boxes, on a mule, travel the distance in six days. To Iça, 50 leagues; cargoes take eight days.

There are no foreigners in Huancavelica. Creole families are few, and the Indian population very poor. Its vegetable productions are raised in this cold ravine; the inhabitants, generally, keep in doors; almost all the Spanish creoles have been to Lima on visits, or educated there, and possess a gay, agreeable manner, and make the cold dreary evenings pass off pleasantly. They have no fires in their houses; as a substitute, they play romping games, and under the exercise keep comfortable until bed time. This was decidedly a merry way of bringing families together, and pleasing to see old folk's romping, like children, with the young people. On one such occasion, a corpulent gentleman had his thumb put out of joint; a pretty girl held the end of it, while others pulled it in place again—by his coat-tails. One of the games is somewhat like "hunt the slipper." All the players stand up in the middle of the room, and carry on to the music of a guitar, violin, or flute. The houses are tolerably well furnished and carpeted. The Indians act the part of servants. They are taken when young, grow up with the children, and frequently remain all their lives in the family; others run away when they become of age, or whenever they are dissatisfied. The Indian girls are often very much attached to their employers, and make cooks and house servants; remarkably neat in their dress, which is not unlike the bloomer style. People wear thick cloth here, even in the house; it is unusual to see ladies without shawls, or gentlemen without cloaks or overcoats. The only fuel known is mountain grass, and dried droppings of llama, like what our hunters call "Buffalo chips."

The desire which we have felt for some two years past to see Lieut. Gibbon's report on the valley of the Amazon is at length gratified, and though the Author's description of that vast region is not calculated to excite emotions of grandeur equal to the subject, yet we feel compensated by his graphic and lively description of all objects which attract

his attention. In his narrative, Lieut. Gibbon has omitted the tedious and uninteresting details which constitute so large a portion of the reports of other officers of our government who have been employed in similar service. He is evidently a man who performs his duty with cheerfulness, taking little account of his labor, while he revels in the enjoyment of every thing calculated to afford rational pleasure. He seems to be in search of objects to excite his wit, and happily he finds them whithersoever he goes. He is just such a companion as we should delight to travel with whether by land or sea.

Article V.

From Greenough's American Polytechnic Journal.

The Use of Oils in the Arts, and their Sources of Supply.

The use of oils is of very great antiquity. They are frequently mentioned in the sacred writings, and are early shown to be an essential in domestic economy; the oil-bearing fruits and seeds were early cultivated, and, especially with the Egyptians, the mineral ores were well known. The Greeks and Romans were celebrated for the production and use of oils, particularly the flax and the rape; in the latter, nearly every valuable property contained in the olive was found. These oils were employed by them for food, for anointing or lubricating, and for burning in lamps. The Romans, as well as the Greeks, were extensive manufacturers of lamps, especially those in terra-cotta, which they exported to all parts of the then civilized world. They also employed oil as a means of obtaining artificial heat, and they likewise used it for heating baths, for domestic and other purposes, on the same principle that we now employ coal gas. It is evident that they had great difficulty in keeping their olive oil from becoming rancid; and thus rape eventually became more valuable, as its oil could be kept perfectly sweet in the seed and could be drawn at pleasure, independent of the meal of the seed, which also had its value.

It is probable that the Romans introduced the rape-seed, with their lamps, into Britain and other countries. But, however that may be, the rape and flax have flourished in most parts of Europe for many centuries, during which they have supplied artificial light, and served other necessary purposes. About the middle of the past century a great impetus was given to the demand for rape oil, on the introduction of woollen and other manufactures into Britain. Then the steam-engine, as a new motive power, vastly increased its consumption; and, at the close of the century, the cultivation of rape and flax had become so extensive that the landholders and others took alarm, under the erroneous impression that oil growing would so impoverish the soil as to cause wheat and other grain to be thrown out of cultivation, and thus

produce famine. This idea became so general, and the popular feeling ran so high against the introduction of machinery, that every means was adopted to prevent the growth of oil. These discouragements and other obstacles placed in the way soon put a stop to its progress, and at the commencement of the present century it had nearly ceased to be grown. The high price of oils at this period gave a great impetus to the whale fishery, and the introduction of coal-gas materially relieved the pressure on the market. The railway system, and the development of marine steam-power, have produced such an immense demand, that all the various oils and oil-seeds we have been able to import from all parts of the world, have not been equal to the demand. The supply of olive oils is very precarious, and, from the want of science and ordinary care in their manufacture, they have been imported for some years past in a most rancid, decomposed state, injurious to the health of those who use them.

From the high price of oils, it has become a common practice to adulterate them with the cheap mineral or other volatile oils, and by divesting them of their color and smell, it is difficult to detect the adulteration. They are all very inflammable, and such is their volatility that their gases sometimes rise at the ordinary temperature, but, if exposed to greater warmth, they are rapidly disengaged; these gases being so much lighter than the atmosphere, are extremely dangerous, both on ship-board and in a manufactory; for they accumulate in any part not well ventilated, until they become explosive. The tendency to spontaneous combustion in linseed oil is greatly heightened by this mixture. I have known sawdust mixed with it take fire in six hours; oakum or cotton waste in eight hours; and two narrow escapes from fire on ship-board from this same cause. It is not improbable that this circumstance may have had something to do with those lamentable fires which have taken place in factories where oils are largely used, during the past two years. These are the sources from which our machinery is maintained in motion, our lamps made to burn, paints, varnishes, and manufactures supplied, and our cattle fed and fattened.

The consumption of oil, says a well known English writer, has greatly increased in neighboring nations, but they have increased their cultivation in the same ratio. This increased growth of oil has produced much larger supplies of oil cake, which has been turned to a most profitable account by the Dutch, who have taken to breeding, feeding, and improving their cattle for the British market. France and Belgium, in like manner, have greatly increased their stock, and it is from this large supply of valuable food that they are now successfully competing with Holland in butters, also for the English market. It is from this cultivation of oil that these countries were enabled to export into the United Kingdom during the past year, 94,548 oxen, bulls and cows, 302,882 sheep and calves, upwards of 10,000 horses, 300,000 hundred weights of butter, and 13,000 tons of oil, besides cheese and various other agricultural products. The importations for the first four months of the present year stand thus; oxen, bulls, and cows, 13,700; sheep and calves, 26,000; butter, 137,287 cwt.; oil, 5,000 tons. Holland has always been proverbial for the cultivation of oil-seeds, and it is mainly from this cause that the Dutch farmers are now the most prosperous agriculturists to be found in Europe.

The rape is a hardy plant, and will grow in almost any climate, but requires attention and care. In India, Russia, and some other countries, it is grown in a half-cultivated or wild state, is sown in the spring and reaped in the autumn. The seeds from these plants are small, and are of a hot character, but capable of being brought to great perfection. I planted one of the East Indian seeds, and it arrived at maturity when about twenty inches out of the ground, with five small branches of pods. By care and management I have brought the produce of this seed, in this, the fourth year, to a plant, five feet six inches high, with fifty large branches of pods. The plant, as grown in Holland and England, is sown early in the autumn; when it puts out large leaves, from twenty to thirty inches long, and when it arrives at maturity these contribute their gaseous and sappy matter to the formation of a short stalk, which ultimately results in a bulbulous head; in this state it lives through the winter. In the spring it expands upwards, throwing out branches at intervals of from six to seven feet in height. It is harvested early in July. The seed is sometimes sown on one plot of land, and the young shoots transplanted in the spring. At other times it is sown in the field, where it is intended to form the crop. It averages five quarters to the acre, and by management may be made to produce much more. This crop is subject to the attack of the turnip-fly and slugs. When young and when in flower, a small beetle lays its minute larvæ in the petals, ultimately furnishing the pod with a maggot, which, forcing open the pod when nearly ripe, causes the seed to fall out. But, with all these drawbacks, it is everywhere acknowledged to be the most profitable crop grown, and the most abundant crops of wheat succeed it in rotation. In Holland its rotation is every fifth year. The straw is valuable as litter and manure. In some parts of Germany the straw is burnt, and the ashes eagerly sought after for fancy soap manufacture. From the beautiful white silvery appearance of this straw, and its fibrous character, it is possible it might be more profitably employed.

The flax plant needs but little explanation; it is everywhere cultivated for the fibre of its straw, without reference to the value of its seed. In England, Ireland, and other parts, it is frequently drawn before it comes to seed, and it is only in Holland where the seed is allowed to develop itself; but, even there, not fully, as there is a prevailing opinion that to develop the seed would injure the fibre of the straw. This idea I believe to be perfectly erroneous. The Dutch also import Riga seed for sowing, on the score of economy, their own produce being much more valuable. Russia is not a natural climate for the flax, and there is not a shadow of science displayed in its cultivation; therefore, we cannot possibly form any conception what the flax plant might be brought to, or what its products really should be. The fibre of the straw, as well as the oil in the seed, are substances formed from the gases of the atmosphere, and it will be found, the larger the development and vigor of the plant to absorb those gases, the greater will be the perfection of the products. Egypt would appear to be the natural soil of the flax, for we read that Pharaoh arrayed Joseph in fine linen; Solomon also purchased linen yarn in Egypt, (2 Chronicles, 1 and 16,) and Herodotus mentions that Egypt was the great emporium for the flax trade. It appears to me that the

Egyptian seed of the present day, although in nearly a wild state, is capable of being brought more readily into a high state of cultivation than the seeds of any other country except those of China.

The importance of a suitable oil or substance for the lubrication of mechanism, is one of great magnitude. All pieces of mechanism, the works of man, are nothing less than inanimate bodies, imitations of the works of the great Creator, as displayed in the animate creation; and it is daily proved by practical experience, the nearer the imitation of the one to the other, the nearer perfection is arrived at. Nature supplies all animate bodies with a lubricating oil, (synovia,) which forms the separating medium between the solid parts of the joints; likewise, all the internal passages of the body are furnished with a like substance, to facilitate the motion of solids and fluids; and the external parts, or outer covering of animals, are furnished with the same oily substance, in quantity and quality according to the density of the element in which they are intended to move, and the velocity they are designed to maintain. Marine animals are striking instances of this. Thus, every animate being possesses the fullest facility of motion, with the least muscular exertion; thus, all mechanism designed for motion must be governed by the same laws, and its economy can only be maintained on the same principles of giving facility to motion, which can only be done by the purity and chemical properties contained in the oil or substance employed for lubrication. This theory is most beautifully developed in that class of mechanism connected with the cotton manufacture. The competition to which this manufacture has been subject, has brought an amount of science to bear upon its economy, that is not to be met with in any other class. Science has brought every portion of the mechanism of the cotton-mill under the strict laws of motion and force, and the most scrutinizing tests are employed for ascertaining the facility, or the retarding influence any new oil may offer, previous to its application. By this course of study, such an immense amount of motion is obtained from a given power, and with a wearing of the parts so immeasurably small, that it can only be equalled by motion in the natural body. The power of force necessary to give to the spindle a revolution of three thousand per minute, is so infinitely small that it can scarcely be calculated. With the vast number of separate bodies in motion, some of them travelling at great velocities, the freedom from accidents, and the security to life and property in those establishments, is surprising. Cotton manufacturers consume the largest proportion of the pure sperm oil imported for which they pay a high price; a matter, however, of secondary importance, when the increase of power thereby produced is taken into consideration. This is the only class of mechanism upon which artificial power has been properly developed, with the exception, perhaps, of private carriages, where the power of the horse has been greatly economized, by the use of patent axles, giving stability and facility of motion, and preventing the destructive influence of oscillation; thus, lighter carriages and cattle are employed, and the speed has been increased, with greater security and at less cost. It is now considered economical to purchase the most expensive oils for the axles even of town carts. Railway and marine machinery suffer greatly from friction, and its inseparable companion, oscillation. The laws that govern motion in the

manufactory are precisely those which ought to govern motion on the rail, but these two great interests manage their mechanism on precisely opposite principles; hence the economy of the one, and the expensive character of the other. The difference appears to be, that the factory is worked with a view to individual profit, the other for that of a company. The ear of one is ever keenly open to the discoveries of science, the other is ever closed. except it happens to flow through certain favored channels. However, a new era appears to be dawning upon railway machinery, as two or three of the leading English railway companies have accepted the offer of some of their engine-drivers to work by contract. If this plan should be liberally carried out by the companies, it will be the first step towards the development of locomotive steam power. The personal interest and responsibility will ultimately work as great changes on the rail as the manufacturer has accomplished in his mill, and will lead to the same principles being carried out in both classes of mechanism. When that is accomplished, it is impossible to say at what speed it may not be perfectly safe to travel, and how much the cost may be reduced. The same remarks are applicable to marine machinery, and if the substances employed as lubricating materials by the large Steam Shipping Companies, and even by the Admiralty, were tested, it would be found difficult to meet with substances offering greater resistance, and, in other respects, more chemically unfitted for the purposes to which they are applied. The purity of the oil supplied to the marine engine is of great importance. The large bearing surfaces exposed to friction, and the nature of the metallic alloys of which they are composed, (copper, zinc, and tin,) render them susceptible of electrical influence, and that influence once exerted, is always liable to a repetition, producing heat, expansion, and all the consequences resulting therefrom. If this subject were better understood by the companies, or some personal interest brought to bear upon the development of marine power, it would lead to much greater economy in its working, and add much to the speed of the ship. A better knowledge of the science of lubrication might also lead to the idea of lubricating the ships themselves, after the manner of marine animals. If that could be accomplished, the velocity of ships might be much increased. It is quite certain, from the great necessity of economizing steam power, that companies and individuals employing it must, sooner or later, employ better lubricating materials; their own interests will force it upon them. But the great question is, where are they to be had.

The subject of artificial light is one of considerable importance; our oils are not so pure as those of the French and other nations, but they are much more expensive. The British rape would supply this deficiency, as, from the purity of its gases, it produces the most brilliant light, and is also capable, by an inexpensive and simple process, of being converted into gas, and employed in the ordinary way. Such is the purity of this gas, that 450 cubic feet is equal to 1000 cubic feet of coal gas, and it may be made applicable to the house, the ship, or the railway train.

It is impossible to say to what extent the value of the flax-seed may be increased by improved cultivation, the oil forming the most important ingredient in the manufacture of paints, varnishes, &c.; but

from the impoverished and adulterated seeds from which it is obtained, our external painting possesses no body or durability: it is very inferior to that of France and Holland. It is also a well-known fact, that artists have for some years been obliged to abandon the use of this oil, from its impurity and impoverished character, and adopt others of lighter body, of the durability of which we have but little knowledge. The paints employed by the ancients and others, down to the beginning of the present century, were of a very different character to those employed at the present time. The mealy part of these two seeds, in which the oil is contained, have ever been considered important articles, (after the oil is abstracted.) from the peculiar properties they possess. The flax is rich in gluten, and the rape in azote. It is well known that the flesh and muscles of animals are greatly increased by food containing azote, and their fat is derived from those containing gluten. The flax meal, when mixed with water, forms a strong jelly, having so great an affinity for oil that it will absorb three or four times its weight without the appearance of oil being present. It is quite tasteless; thus, the ancients mixed olive or rape oil with water, wine, or aromatic essences, and employed it as food for medicinal purposes, and for anointing the body, &c., &c. The Jews employed oil and wine medicinally, and had a variety of rules for mixing it; rape oil, mixed in this way, is eaten as food by the Russians at the present day. Whatever effect this food might have upon man, it certainly has an extraordinary effect upon animals, as it rapidly increases their size and weight. When applied for anointing the body it is largely absorbed by the skin, expanding the muscular fibres, and producing an agreeable elasticity and softness. For anointing the feet it is quite a luxury. It is used in Europe, in some parts, for extracting the oil from woollens, instead of soap. Its affinity for uniting with animal matter is very striking, and, on the other hand, when mixed with the oil of its own seed, its affinity for uniting with vegetable bodies is equally apparent. The meal of the rape possesses the same affinity for uniting with oil and water, but is destitute of the gluten. It is, like the oil, rich in azote. The Dutch farmers have discovered the value of these properties and are now giving their cattle these two meals mixed with water; the more scientific frequently add the rape oil; the effect of this food upon horses is very striking. It is also a fact long known, that men employed in factories where rape oil has been largely used, soon acquire muscular strength and vigor, and are freed from pulmonary and cutaneous disorders. I find also in the engine-room of steam-ships, that the men are more healthy when rape oil is used, then when olive or sperm oil is used. There is another most important fact in connection with this description of food — the excrement or manure from cattle fed upon it possesses high fertilizing properties. I have the opinion of some very practical and skillful agriculturalists in Belgium and Holland, who state that they prefer the manure of cattle liberally fed upon this food to guano; they consider it more congenial to the nature of the soil, and more lasting in its effect. Those farmers who grow the rape, generally stipulate, when selling the seed, for the return of the cake; by this means, exportation is partly prevented.

It is well worthy the attention of our farmers to investigate the properties and relative values of the oleaginous plants, and still fur

ther extend their culture, which would, no doubt, prove highly beneficial, particularly as there are renewed efforts now making to introduce the more extended manufacture of linen into this country.

Among the numerous palms that have produced oils, we may mention one that has, till lately, attracted but little attention, the CAHOUN of Honduras. This tree is found alone in the region of Central America; it is a true palm, being in appearance similar to the Cocoa-nut tree; the branches are precisely the same in structure, but spread more, and not so high, and the trunk is considerably thicker. The order and regularity in which they grow are surprising. Rows of them, which presented the appearance of having been planted with the greatest care, closely resembled the nave and aisles of a cathedral, the arched branches meeting overhead and producing an exact imitation of the vaulted roofs; and, if the sun were declining, the horizontal rays shining at intervals through the sides of the avenue, created the splendid effulgence of the most richly painted windows.

This tree bears a nut about the size of a large hen's egg, which grows in huge clusters, each cluster resembling a bunch of grapes. The kernel tastes a little like that of the cocoa-nut, but it is far more oleaginous, and the oil which is extracted from it is infinitely superior. No other oil is burnt in Honduras but the cahoun and the cocoa-nut oil; but a pint of the former will last double the time that the same quantity of the latter will. This oil (the cahoun) congeals at a temperature of 75 degrees.

The country of Honduras consists principally of two kinds of land; the one is called a "Pine Ridge," and the other a "Cahoun Ridge." The former is a sterile, sandy soil for the most part, but contains here and there patches of great fertility. These "green spots" in the midst of this sandy wilderness are the resort of immense herds of deer and antelopes, the flesh of which bears not the least resemblance to the succulent, well-fed venison of this country, but is dry, white, stringy, and an utter stranger to fat. The only way to make it eatable, is to disguise its real nature, and dress it as veal, for which meat, after a long absence from it, it is a tolerable substitute. The pine ridge is covered with innumerable red pines, which are very much more resinous than the red pine of America. From these trees any quantity of pitch, of an excellent quality, might be extracted. This would also be a very valuable article of commerce.

The Cahoun Ridge differs materially from the Pine Ridge. The soil of the latter, as I have said, is sandy and unproductive; whereas, that of the former is rich and loamy, and possesses every agricultural capability. There is no tree, plant, fruit, nor root, which is produced in the tropics, which cannot be grown in great abundance upon these ridges. The Cahoun trees here abound. For miles and miles you have nothing but forests of them; and yet, with all these forests of trees, bearing nuts from which a most valuable oil can be extracted, for which oil a ready market would be obtained in every town in Europe and the United States, no one has yet been found—whether from a want of energy and enterprise, or from pre-occupation in other pursuits I am not able to say—to turn them to a profitable account. No one single bottle of oil has ever been exported to Europe, or elsewhere, as an article of commerce. Over these vast fields of wealth

a few old negro women occasionally wander, picking up the nuts which have fallen accidentally to the ground, from which, in their rude and clumsy way, they manufacture as much oil, and no more, as will satisfy their personal wants, and purchase for them a few *luxuries* in the shape of pickled pork and gin, pipes, and tobacco.

These Cahoun trees yield one crop every year; this crop consists of generally three and sometimes four, bunches of nuts, as close together as grapes; the nuts are of the size of a small turkey's egg, and on an average there are eight hundred nuts in one bunch.

The people here extract oil from them in the following manner:—When the nuts are what they term full, they break, between two stones, the shell, which is very hard, then pound the kernel in a wooden mortar; the sediment is then put in a boiler with water, and boiled down until all the oil or fat floats; they skim the oil off, fry it in an iron pot, so as to disengage all the aqueous particles, and then bottle it; by this simple process, the average yield is one quart bottle of oil out of one hundred nuts.

With improved machinery, more oil can be extracted, and if any one with some capital, having a ready market for his produce, would undertake such a manufactory, there is no doubt that the staple article, say nuts, will not be found wanting; there would always be an abundant supply on hand, because the women and children who live along the banks of the rivers, having nothing else to do during the dry season, and being certain of a trifling remuneration, would vie with one another to bring to such an establishment the produce of their labor, which only consists in picking up and gathering the nuts.

DEPARTMENT OF PUBLIC IMPROVEMENT.

Iron Mountain Railroad.
ANNUAL REPORT.

To the Stockholders of the St. Louis and Iron Mountain Railroad Company:

The Board of Directors, in conformity with provisions of the charter of said company, respectfully submit the following report of the operations and conditions thereof:

At the date of our last report, November, 1853, the construction of the road bed from St. Louis to the Meramac river, had been let to Messrs. Holmes & Co., and shortly after, a section of some six miles below Mrs. Waters', extending west about two miles beyond Dunklin's, (at which point the road leaves the Mississippi river,) was let to the same parties. They commenced work and prosecuted it with vigor during the winter and spring. A contract was also closed with Messrs Conran and Bennett for the bridge masonry at Meramac river, and with Messrs. Brown & Co., for the pile work necessary for foundations, but not in time for any

thing of consequence to be done before the spring and summer flood. These contracts were based upon cash payments by the company as the work progressed. Afterwards, on the 28th day of February, 1854, the proposition of Messrs. Wm. M. & Charles N. Watts, and W. M. Roberts, of Pennsylvania, was accepted, and a contract entered into with them for the graduation, masonry, bridges, ties and track laying of the entire line from St. Louis to the Pilot Knob, (excepting the work already let,) payment to be made in the bonds of the city and county of St. Louis, and of the State of Missouri at par, five per cent. being added to the schedules of monthly estimates, and an additional five per cent. on the total estimates of the work to be paid them in stock at a bonus, should the whole work be completed in contract time, viz: from St. Louis to Big River (forty-seven miles) by first July, 1856, and through to Pilot Knob by first December, 1856, the company furnishing the rails, chairs and spikes six months in advance of those periods. The prices per yard for earth excavation, rock work, masonry, ties, &c., were considered reasonable by the Engineer, and are in fact less than have since been paid by other roads in the State, now under construction. Messrs. Watts & Co. had also the privilege of making an arrangement with Holmes & Co., by which said Watts & Co. might also take the work let to Holmes, on the same conditions as the rest of the line, which they have done, thus becoming responsible for the whole work, except the Meramac bridge and a small section of graduation adjacent, and the graduation through the lands of Messrs. Kayser and others, between the Arsenal and Carondelet, which was reserved to them in settlement of land damages.

Messrs Watts and Roberts have sub-let the work on all the sections throughout the line, except between the Iron Mountain and Knob, about six miles, and they expect to sub-let this portion to a party now examining the grounds, in a few days.

Their contractors are mostly men of experience in railroad work, known to Mr. Roberts (in charge as Chief Engineer of the Allegheny Valley railroad, Pa.,) as such, and from the manner in which they are generally taking hold and making preparations, the directors have reason to believe will not be deterred by any ordinary obstacles from urging their work to completion. The grubbing and clearing is done on the large portions of the line, and the excavations both in earth and rock cuts is commenced at nearly all of the most difficult points. Owing, however, to the heat of the summer, the death of some of the sub-contractors, and sickness amongst the operatives, together with the difficulty of negociating the securities at fair prices, comparatively little has yet been done. In view, however, of the high prices that have ruled for labor, and the low figures realized for securities, the directors have not deemed it advisable, to urge the contractors to greater efforts.

They are now fully prepared to go on as rapidly as may be desired, and as the price of labor is coming down, no further delay is anticipated, should the prices of our bonds justify pushing the work.

Upon this depends its ultimate success; and it is evidently better policy (however anxious we may be to complete the road at an early day) to work slowly and wait patiently, whilst the securities are greatly depressed, rather than to force the contractors to sacrifice them at ruinous rates, thus breaking them down and wasting our own resources. Our means being, in the best possible view of the case, considerably short of the amount requisite to put the road in operation, no argument is needed to show that the company cannot afford, in the very beginning of the enterprize, recklessly to waste them.

The subscriptions to the stock of the company are as follows:

County of St. Louis,	payable in	bonds,	$500,000 00
City of St. Louis,	do	do	500,000 00
City of Carondelet,	do	do	50,000 00
Am. I. Mountain Co.,	do	do	25,000 00
Am. I. Mountain Co.,	payable in	cash,	50,000 00
Madison Iron and Mining Co.,		do	50,000 00
County of Washington,		do	75,000 00
Contractors,		do	30,000 00
Individual stockholders,		do	212,300 00
Making a total of subscription of			$1,492,300 00
To which add State credit			750,000 00
And the sum of			$2,242,300 00

appears, as the amount of means at the disposal of the Directors, counting the bonded securities at par value. The revised estimate of Engineers, as per report herewith submitted, makes the cost of the road, finished complete to the Pilot Knob, including rolling stock, depots, land damages, interest, engineering, office expenses and contingencies, $4,100,000, leaving a deficit of nearly two millions of dollars to be otherwise provided. A part of this amount can, however, be dispensed with for a time, by making temporary depot buildings, and reducing the allowance for rolling stock to a bare sufficiency to start with, leaving the residue to be added as the business of the road requires it. To raise this amount on the construction bonds of the company, as originally contemplated, would, in the present condition of the market for railroad securities, be utterly impracticable.

But we rely upon the aid of the Legislature to place our road on an equal footing with the other great trunk roads of the State. The $750,000 State credit we have was granted for a branch road from the Pacific Road to the Iron Mountain, about sixty miles in length, and transferred to the direct road on the failure of that

company to commence construction within the prescribed time. Our road *direct*, is eighty-six miles long from Hazel street to the Pilot Knob, and counting its entire length, to the State line of Arkansas, about 210, or nearly the same as the North Missouri, and but eighty miles shorter than the Pacific to Kansas. Looking to its vast importance to the State, not only as a local road, opening up a communication between St. Louis, the terminus of the other great trunk roads, and the iron and lead regions of Washington, St. Francois and Madison counties, but also as a link in the great Mississippi Valley Railroad, giving connections with Cairo, New Madrid, Memphis, Helena, Little Rock, and by the improvements already in progress east of the Mississippi, with Nashville, New Orleans, Mobile and Charleston, we may certainly expect for this equal favor with any other road, at the hands of the Legislature.

To put us on a like footing with the North Missouri, we should have 1,250,000 additional State credit, with the help of which St. Louis herself may and should be relied on to furnish the balance of the means necessary.

It is not considered necessary to enlarge upon the vital necessity to St. Louis of the Iron Mountain Railroad. But one opinion prevails amongst our citizens on that subject. It *must* be built. And that it will be a paying road when completed, if due regard is had to economy in its construction and management, there cannot be a doubt. It will commence with a mineral and lumber business almost or quite sufficient to sustain it, without having to wait for the settling and improvement of the country, consequent upon the building of the road itself, and the thousand new sources of trade thus opened up, which it is impossible with any degree of certainty to estimate, or even form a conception of at present.

Reference is had to Engineer's Report submitted herewith, for estimates of business, and full details as to location, progress of construction and other matters connected with the road, which, as it is very comprehensive, it is hoped will prove satisfactory to the stockholders, and also when published, to the general public.

Most of the land necessary for the road-bed has been acquired by the company, and the cases remaining where the private proprietors have not yet relinquished, are in progress of adjustment by legal condemnation. The cost of this item (land damages,) has been much greater than was anticipated, but was unavoidable under the circumstances, and will not probably exceed in the aggregate the estimate made by the engineers for the entire line; of which, however, far the larger part has been incurred in the first six miles in leaving the city, and getting through Carondelet. The bill introduced in the present Congress to relieve the company from the onerous restrictions imposed on the grant of way through the Arsenal, Marine Hospital and Jefferson Barracks tracts, passed

the House of Representatives and also the Senate, with an immaterial amendment; but not being again reached in the House, requires the further action of that body at the ensuing session before it becomes a law. No doubt exists that it will pass without further serious opposition. The company have also acquired lands for two depots in the city of Carondelet—one in the lower part of the city, in block 66, with a river front, sold to the company for a nominal consideration, by Messrs. Carline & Erskine; and another, (block 21,) in the centre, purchased of Mr. Tilman. Negotiations are also on foot to purchase a suitable site for a station in the northern part. The company own a lot purchased of Messrs. Blair, in block 6, northward, (as the cheapest mode of getting right of way through the ground,) which may be made available for this purpose, or exchanged for a more suitable one, a few blocks further south.

The city of St. Louis have given the Company the right of way up Main street, as far as Hazle street, for the consideration of ten thousand dollars, (to be expended in grading the street, which will be, in fact, making the road bed,) and have also sold to the Company a large block of ground, say four hundred feet square, to be selected, between Main street and the Wharf, for the purpose of a Depot, for the very reosonable price of $5,000. This block has not yet been selected, for the very reason that arrangements must be made for more land, to answer the purpose of the company, adjacent to that which may be obtained from the city. Four acres of land on the line of the road, immediately south of the Arsenal wall, have also been obtained from the Messrs. Papin, for the purpose of a machine (repair) shop, and which may also be used as a temporary stopping place for trains until the regular depot ground near the centre of the city can be made available, as this lot needs but little filling or grading.

No arrangement has yet been made for the purchase of rails. The price has been so high, and still is, that it was not deemed advisable to purchase a year or more before it is wanted, even had the means been at hand, and in the condition of the fiscal affairs of the Company, it could not be done on favorable terms at any rate. There is time enough yet, and it is reasonable to hope that some months hence the supply and demand for this important article will be more evenly balanced, and a reduction in price will take place. A contract for three locomotives has been made with Messrs. Palm and Robertson, of our own city, to be ready as soon as they will be required, either on constructions or starting a passenger train to Carondelet or Jefferson Barracks. It was necessary to provide for these in advance, as the shops usually have orders many months ahead, and considerable time is required in building engines after they are ordered.

In regard to finishing at once a portion of the road, say as far as Carondelet, and placing an omnibus train upon it, both for the

accommodation of the public and for the purpose of giving confidence to the stockholders, that something is actually doing, the Directors would say that, in their opinion, the benefit proposed to be gained did not justify any greatly increased expense to accomplish the object; and in making a settlement on the best terms possible with Messrs. Kayser and others for right of way, the construction of the road-bed over their property was let to them, and such time allowed them for its completion as would give them the benefit of the deposit from two summer floods. The death of one of Messrs. Watts' contractors, on the section below Messrs. Kaysers', has also delayed operations on this part of the line. The work, however, is not heavy, and it can be fully prepared for the rails in a few months, if circumstances should seem to demand that this part of the work should be pressed forward to completion.

The annual statement of the Treasurer is hereto annexed, and made part of this report, from which it will be seen that the total amount collected from stock subscriptions to date, in cash and bonds, is $445,170, viz:

In bonds of the city and county of St. Louis		$325,000 00
Bonds city of Carondelet		25,000 00
In cash from subscribers		95,170 00
To which add prod. of bills payable	19,391 59	
For instalment of the State bonds	50,000 00	—69,391 59
And the total receipts in cash and bonds are		$514,561 59
Of which there has been paid out:		
For construction, in cash		28,951 61
In bonds of the State	25,000 00	
In bonds of the city and county of St. Louis	46,000 00	—71,000 00
Together		$99,951 61
For engineering, cash		43,822 27
For contingencies and office expenses, including salaries of President, Secretary, Treasurer and Counsellor		10,443 09
For land and damages, for right of way		10,742 70
For real estate		20,177 10
For interest		948 63
For fen ng		30 00
Making disbursements		186,115 40
Balance		$328,446 10
On hand, city and county bonds	279,000 00	
Carondelet bonds	25,000 00	
State bonds	25,000 00	
	$329,000 00	
Overdrawn on Treas. in cash, diff.		553 31
		$329,000 00

From this exhibit it will be seen that a comparatively small amount has been paid of the calls made by the Directors on stock subscriptions, in cash. The instalments called for on old stock amount, in the aggregate, to 55 per cent., exclusive of the 10 per cent. due 15th December, 20 per cent. having been called from recent subscribers, payable at the same time. The Directors have been very unwilling to resort to legal measures to coerce payment from those in default. But if they are to comply with the contracts entered into for the construction of the road—if the road so much desired by all is to be completed, and the advantages of a connection with the greatest mineral region in the world realized, they will have to require the punctual payment of instalments, as called, and insist upon all arrearages being paid into the Treasury without delay, and the Board have given notice to delinquent stockholders accordingly.

All which, on the part of the Board of Directors, is respectfully submitted by

L. M. KENNETT, President.

Hannibal and St. Joseph Railroad.

PRESIDENT'S REPORT.

Public works, for whatever purpose constructed, are monuments which attest the genius and commemorate the objects which impel a people to unite in social action. Hence an account of the origin, progress and nature of public enterprises constitutes an instructive and interesting portion of a nation's history. The mind, prone to associate all objects with the intelligence which brought them into existence, when contemplating these monuments of human labor, desires to know something of the individuals by whom they were conceived and accomplished. We are, therefore, pleased to find that the President of the Hannibal and St. Joseph Railroad has embraced in the following report a history of its origin and of his own connection with that great work.

Owing to causes familiar to the public Economist ,all public improvements calculated to facilitate commerce, and change the existing relations between producers and consumers, meet with uncompromising opposition from a portion of the community for whose benefit they are designed. He that would change the industrial pursuits and commercial relations of a people by means

of a great public work, is regarded by many in a light similar to that in which the loyal subject regards one who aims to revolutionize the government of the country. And to ensure the accomplishment of his designs, the former should possess the elements of heroism in as high a degree as the latter.

We admire the self-sacrificing spirit, indomitable perseverance, and tact exhibited by the President of the Hannibal & St. Joseph Railroad in reference to the consummation of that enterprise, and rejoice to find that the completion of the work within a reasonable period is regarded as a certain event. We should have been better pleased, could a larger portion of the stock have been owned by citizens of our own State, but they having refused to subscribe, we are persuaded from such facts as have come to our knowledge, that the Directory were fully justified in disposing of the stock to non-residents.

PRESIDENT'S REPORT.

To the Stockholders of the
Hannibal & St. Joseph R. R. Co.

GENTLEMEN:

In compliance with the provisions of the charter, I proceed to lay before you, on behalf of the Directors, a statement of the present condition and affairs of the Hannibal & St. Joseph Railroad Company.

In connection with this statement will also be found such remarks and explanations as are deemed necessary, not only to place our great enterprize, and its present favourable condition, fairly before the country, but to vindicate its original friends—its constant and disinterested advocates and supporters—from the ungenerous and unwarrantable assaults that have been made upon them, by the uninformed or designing, at every step of its progress.

It will be proper here to remark, that a true report of the condition of the company has been presented at every meeting of the Stockholders—a report dictated by the friends, and not by, nor for, the enemies of the road.

Since, however, the motives of the Directors, and of the President in particular, have been impugned and severely commented upon, for withholding, as is alleged, the proper information from the public, I may be pardoned for prefacing the account of the present condition of our road with a condensed statement of its early history.

During the session of the Legislature of 1846—7, a discussion originated in the Senate (of which I was a member,) upon a proposition to repeal an act dividing the proceeds of the sales of five

hundred thousand acres of land, which Congress had donated to the State of Missouri for general objects of internal improvements, to wit: Railroads, &c., among the counties, share and share alike, without reference to the general objects for which said lands were granted. This discussion, which was an exciting one, and which occupied much of the time of the entire session aroused a spirit in favor of internal improvement, which has since prevailed throughout the State.

During that session I had the honor of offering a resolution instructing the Committee of Internal Improvements to enquire into, and report upon, the expediency and practicability of a Railroad from Hannibal to St. Joseph. The committee reported a bill, which among other things appropriated one hundred and ninety thousand dollars to the survey and commencement of the road. This bill passed the Senate, but was laid upon the table in the House of Representatives "until the close of the Mexican war." I then offered the following Bills which likewise passed the Senate, but met with a similar fate in the other end of the capitol—First, a Bill postponing the operation of the Distribution Act until the end of the next General Assembly. Also, a Bill giving six years to the pre-emptors who held these five hundred thousand acres of land under the State in which to make their payments, the whole to be paid in three equal instalments.

These Bills were intended to save the internal improvement fund from being squandered, until the people could send up Representatives instructed as to its appropriation. As an evidence of the spirit existing at that time, I will state that petitions were circulated along the whole line of the road, and numerously signed, remonstrating against the action of the friends of the measure in the Legislature. After the failure of the Bills above mentioned, I then submitted and obtained the present charter.

We were thus left with the naked charter, without any aid either from the Legislature or the people, even to test the practicability of the route by the necessary preliminary surveys, with the opinion prevailing almost universally in the public mind, that the scheme was visionary and impracticable, and if practicable pregnant with certain injury to the State.

Under these circumstances, a sufficient amount of stock could not be obtained to organize a company under the provisions of the charter—it requiring the actual construction of the road to be commenced within three years from the date of its passage.

At the session of the Legislature of 1848–1849, by which the charters for the Pacific and other railroads were granted, there was no company organized for building the Hannibal and St. Joseph railroad, no stock worthy of notice taken, and great probability existing of the charter being forfeited before another session in consequence of the work not being commenced within the time prescribed.

With a view to the preservation of the charter, I then procured the passage of a Bill extending the time for commencing the work to four years from the passage of the act, and also made an effort to procure the aid of the State to the amount of five thousand dollars, to test the practicability of the route. This aid could not be obtained except upon condition that Congress should first give alternate sections of land for a width of six miles on each side of the road, and the State be entitled to stock in the road to the amount of the appropriation.

I also procured the passage of a Bill in the Senate providing for a special election, one year in advance of the general election, giving the people an opportunity to decide at the polls between the application of the public improvement fund to general or local objects of internal improvement. This Bill, which was intended to elicit discussions and create an interest throughout the State, and thus procure means to preserve the railroad charters, was defeated in the House of Representatives.

Thus at the end of that session also, no company had been organized, no aid given, nor a sufficient amount of stock taken, to justify the belief that a company with adequate capital ever could be organized. With the novelty of the project, the interest in it had also vanished, and a feeling of disgust had taken the place of curiosity. The bare mention of a subject, upon which so much had been said and so little done during a period of four years, had become irksome, and even offensive, to the people. A natural inclination to depreciate the efforts of others, and to exult over their defeat, led many not only to look upon, but treat the advocates of the measure with contempt and ridicule.

Under this aspect of affairs, what was to be done?—was this magnificent project to be abandoned, and its advocates left to receive their reward in the depreciated stock of what would in that event have been designated an exploded humbug?—or were they to make one more effort to succeed? It occurred to me that the magnitude of the object would justify the attempt. It was therefore made:—with what success the following facts will show.

Upon consultation with some who are members of the present Board, I started a subscription to raise money to defray the expense of a preliminary survey, to test the practicability of a railroad from Hannibal to St. Joseph. With this paper in my pocket —at my own expense—a hopeless invalid, on crutches, accompanied by the jeers of some, and the warm sympathy and hearty co-operation of others, I commenced traversing the country from the Missouri to the Mississippi to procure means to carry out the object. The necessary instruments were procured upon my own responsibility. Having received assurances of aid, I left subscription papers at various points along the line on my return to St. Joseph. Immediately a corps of public spirited engineers was organized, and took the field under the direction of M. F. Tiernin,

Esq., as chief engineer. For the entire outfit and expenses of this party, including the pay of twenty men, I was held personally responsible. This first survey of the Hannibal and St. Joseph railroad was completed in eighty days, and to it we are debtor this day for whatever of pride or profit may accrue to us from its ultimate completion. For this survey saved the road by awakening an interest in the public mind, thereby enabling its friends to raise a sufficient amount of stock to save the charter by the organization of a company in accordance with the provisions of the law.

Although the entire line was canvassed several times from end to end, through every kind of exposure and opposition, and notwithstanding the liberality manifested and extended to the work on several portions of the line, the amount raised by subscription was totally insufficient to defray the expense of the survey.

The success which attended our efforts kindled a laudable spirit of emulation in the minds of our friends of the Pacific road, and it is highly gratifying to know that our humble efiorts, though not fully appreciated at home at the time, were thought worthy of example by the President and Directors of that great enterprise. In the speech of Mr. Allen to the citizens of St. Louis, reference is made to the fact of our survey having been made, and assuming it as a fixed fact that our road would be built, an appeal was made to their public spirit and their local interest to follow our example. It was followed; and the two roads were soon placed in a condition which justified the Governor in recommending the credit of the State to be given to them to the exclusion of all others, alledging as a reason for so doing, the amount of stock that had been secured, and the energy and public spirit manifested by their friends.

Thus approved by the Governor, by means of the efficient co-operation of the President and friends of the Pacific road, with the friends of our own road, in the Legislature, the credit of the State was obtained for both. And by the same cordial co-operation, together with the energy and skill manifested on the part of the members of Congress from Missouri, the land grant was obtained to aid the State in the construction of these two railroads; and subsequently, by an act of the Legislature, a portion of those lands was applied to aid in the construction of our road.

From these beginnings, the spirit of railroad enterprise has become general throughout the State. Is it, then, too much to say that the internal improvement system of our State had its origin and first impetus among and through the early friends of this road? particularly when we remember that Congress was first memorialized for land to aid in the construction of this road.

Having said thus much, which some may consider a personal narrative, rather than a history of the railroad, but which I deemed necessary as a sufficient answer to the charges which have sometimes been made, of having been influenced by personal and inter-

ested motives, I will proceed to lay before you a statement of the affairs of the company.

Previous to the first monday in November, 1853, there had been subscribed to the capital stock of the company the following sums: (the counties and cities issuing bonds payable twenty years after date, and bearing interest at the rate of 6 per cent. per annum for the calls)

City and county subscriptions	$446,400
Individual	184,400
Making an aggregate of	$630,800

Out of this amount there had been collected prior to November 7th, 1853,—

From individuals	$13,697.85
From counties and cities (in bonds)	57,240.00
Making an aggregate in cash and bonds	$70,937.85

Thus it will be seen that the Directors had available means wherewith to carry on the work, to make selection of the lands granted to the company, and to defray the other expenses incidental to such an enterprise, only the sum of $13,697.85—a sum totally inadequate to meet the necessary current expenditures. Mr. Corby, as agent on the part of the company, shortly afterwards effected a loan for the sum of $50,000, on terms most favorable for the interests of the company, thereby enabling them to keep the operation alive to a certain extent.

The disbursements of the company to November 7th, 1853, were as follows—

Engineering department		$42,800 37
Contingencies, &c., &c		16,002 10
Interest account		4,057 98
Right of way for road bed		262 00
Expense of land grant for plats, descriptive lists, &c		857 75
Paid contractors		25,243 05
Making an aggregate of		$89,223 25
Deduct from which—		
Cash loan	$50,000	
Cash from stockholders	13,697 85	$63,697 85
Leaves a deficiency of		$25,525 40

To which may be added the existing indebtedness at that time, as follows—

Due to contractors	$40,354 70
Due for right of way	13,542 00

Due engineer's department.....	6,901 53	
Due salaries and contingencies.....	7,175 28	
Loan of borrowed money.....	50,000 00	$117,973 51
Total indebtedness Nov. 7th, 1853.....		$143,498 91

This indebtedness was in excess of all the assets of the company.

Without entering into the details of the efforts made to collect on subscriptions of stock, it may be sufficient to remark that many refused payment, alledging conditions in their subscription. Many had died, or had removed from the country, to California and elsewhere. It may be also remarked that the Directors never authorized any conditions to be made on subscriptions to the capital stock.

The condition of the affairs of the company at this time was such that some aid, other than that which might be expected along the route, must be obtained. The county and city bonds, running twenty years, could not be relied upon, because the character of the bonds would not be sufficiently appreciated in the money market—no provision having been made by taxation or otherwise by the counties issuing them, either to pay the accruing interest or to ensure their ultimate redemption.

The collection from individual stockholders was precarious, and should the whole amount then available from that source be collected, it would be insufficient to pay the liabilities, thus leaving a surviving debt and an impaired credit to impede the further prosecution of the work.

In this condition, the Board entered upon the discharge of their duties for the year 1854. For an account of the work performed, and the payments made thereon, I refer you to the reports of the Chief Engineer, Secretary and Treasurer, herewith submitted.

I have thus briefly stated the condition of our affairs, and the efforts made to keep our enterprise alive. I will now briefly state the course of policy which the Board felt themselves bound to adopt, in order to relieve the company from the embarrassing difficulties which surrounded them, and to secure the completion of the road.

The land which had been granted to the company by the act of Congress, and had been assigned by the State of Missouri to the purposes for which it was donated, had not been selected and confirmed.

The company were entitled to the State credit for the sum of one and a half million dollars, but owing to the cause above related, the county and private subscriptions were so inefficient, and reduced in actual amount below the sum of half a million dollars, (one of the conditions in the act granting to the company the State credit, requiring a bona fide subscription amounting to

$500,000,) that any relief from that source was not practicable. The counties had been importuned for subscriptions of additional stock, and books were again opened, with the hope that the citizens along the line of the road (who were immediately interested in its construction) would come forward and subscribe a sufficient amount to enable the company to avail themselves of the State credit.

Various efforts were made to procure loans of money from eastern capitalists, which failed for reasons not necessary to detail here; but which might have been obtained at the East by a proper co-operation from home. All these sources failing, the Directors fearing the ill-effects of a renewed failure, determined to secure from citizens residing out of the State, if possible, that assistance which could not be obtained from citizens at home.

Accordingly, negotiations were opened with citizens of the cities of Boston and New York, and resulted in procuring a subscription of one million dollars to the capital stock of the company. I am happy to be able to state that, in addition to the high standing and character of these gentlemen, they bring with them an amount of railroad influence that must be of important service to our improvement, both in regard to its connection with lines of road extending eastward from the city of Hannibal, and also to its ultimate extension westward from the city of St. Joseph in the direction of the Pacific.

The facilities thus afforded enabled the company to pay off their existing liabilities, and to prosecute the work.

The accompanying report of the chief engineer, Maj. Bucklin, will show you the amount of labour performed in the construction of the road, and its present and prospective condition. The preliminary survey of the road was necessarily of a very difficult and elaborate character partaking more of the nature of a definite and exact measurement than of ordinary experimental lines. The diversity of local interest, and a laudable desire on the part of the Directory, to ascertain the true compromise between the interests of the company and the best interests of the community, induced the examination of a number of routes, and by the conditions of the contract, the best route was not only to be found but proved to be so by comparative estimates.—Consequently over one thousand miles of experimental lines were examined and instrumentally tested during the progress of the surveys. From an examination of the rpeorts of Maj. Bucklin, and from my own observation, I am fully justified in saying that the field work and computations of the Hannibal and St. Joseph Railroad will both in respect of skill and economy compare favorably with any similar work in the United States, and that he and his associate engineers are eminently entitled to the high degree of praise and credit which have been universally accorded to them by all who are qualified to appreciate their labors. The total cost of engineering up to this date has

been about $330 per mile, and in all probability will not exceed $800 upon the completion of the road; whereas the annual report of railroad corporations for the State of Massachusetts, for 1850, shows an average expenditure of over one thousand dollars per mile on eighteen roads constructed in that State.

Under a system of economy (then necessary for securing co-operation, as well as to the poverty of the treasury,) adopted at an early period of our corporate existence, the Board entrusted the collection of calls on the capital stock, and the delivery of stock certificates to county agents, in each county along the line of the road in which subscriptions had been obtained. Owing to the scattered residence of the subscribers, and their unwillingness to pay, these agents have not been able to make satisfactory reports; and hence the Board cannot report more definitely the precise number of shares now considered as reliable.

But with the accruing stock agreed to be taken by the contractors, (being 10 per cent. of the cost of the whole construction,) the total present amount of reliable shares may be estimated at 19,400, equal to $1,940,000.

From the date of the first legal organization of the company to the present time, it has been my chief effort, in conjunction with the Directors, to press forward the work, and to procure the necessary means without oppressing the country. How far our efforts have been available, and with what skill we have managed the affairs of the company, is not for us to judge.

But we can truly say, that, surrounded by difficulties, our actions misinterpreted and misconstrued, we have never faltered in our exertions to secure the means and place the success of our enterprise beyond the possibility of a doubt; and to realize the hope that the country will enjoy the beneficial results to flow from its construction, at as early a period as anticipated by the warmest friends of the enterprise.

Land Grant.—On the ninth day of February, 1854, the Commissioner of the General Land Office and Secretary of the Interior affixed their official signatures and approval to the list of lands assigned in aid of the construction of the Hannibal and St. Joseph Railroad, amounting to near 600,000 acres, subject to corrections.

Since that time, Mr. E. B. Talcott, the land agent of the company, and one or more of the Directors, have bestowed their constant and most vigilant exertions to the corrections and increase of the quantity of land assigned to the company.

I feel assured, however, that we shall obtain every acre remaining vacant, to which the company is entitled by the allotments of the law, and for which I must refer you to the very intelligent report of E. B. Talcott, Esq., the land agent of the company.

The increased quantity of acres will be derived from lands due by allotment agreed upon with the General Land Office, and by

recoveries from the list of swamp and overflowed lands claimed by the counties, which conflict with the allotment to the company.

The total quantity of land to which we will be entitled by these additional amounts, will exceed 600,000 acres.

I may, however, say that from personal examination of a very large portion of these lands, and from information derived from statistical reports of hemp, tobacco, and other staple products of the soil along the route, and from the vast beds of bituminous coal that exist beneath the soil, I feel assured that, upon the completion of the work, the original estimate of the value of these lands, made by Major Bucklin, the Chief Engineer, in his letter of the 1st of June, 1853, will be fully verified.

The present condition of our enterprise may be stated as follows: The company have discharged all their liabilities, and are now free from debt. A large amount of work has been done, and of a substantial character. About forty miles of the grading is nearly completed, and in readiness for the superstructure. This work embraces some of the heaviest and most costly portions of the road.

The finances of the company are in a sound condition, and the means at their command for future operations are deemed sufficient, until a more favorable state of the money market will admit of more vigorous operations.

The present Board have prepared and executed the necessary mortgage of their lands and other property, to secure the sum of four millions of dollars and the accruing interest; and also bonds bearing seven per cent. interest, to the amount of two millions, are now ready to be put in market at the first prospect of their being negotiated. These bonds are entrusted to an agency of high standing in Boston and New York. Their interest in the work, their reputation as capitalists and gentlemen of high moral character, are a guarantee that the means will be raised, and the work pressed forward with vigor, at as early a day as prudence and a due regard of the rights of stockholders will permit; and that the road will be fully completed within the contract time.

All of which is respectfully submitted.

R. M. STEWART,
President of H. & St. J. R. R.

BUREAU VALLEY RAILROAD.

The first trains through from Chicago passed over this Road on the 7th of November, 1854.

OHIO AND MISSISSIPPI RAILROAD.

On the 21st November, 1854, the Railroad connection between St. Louis and Cairo was established by the Ohio and Mississippi, and Illinois Central Railroads, and on the 27th two hundred and fifty-seven paying passengers were transported to St. Louis by the O. and M. R. R., the Illinois Central having transfered more than one hundred and fifty.

On the 28th, a Railroad Celebration was prepared at Salem, sixty-eight miles from St. Louis, on the O. and M. R. R.; and a special train of cars, containing over one hundred guest from St. Louis, invited by the citizens of Marion County, arrived at their prosperous prairie town, just in time to partake of the bountiful entertainment that was spread out before them. A flourish of trumpets was made by a large band of Salem musicians, an eloquent discourse of welcome, on behalf of the people, was delivered by T. F. Houtz, Esq., and a response from an overflowing heart was returned by Hon. John How, Mayor of St. Louis; when he, with Judge Hackney of the St. Louis County Court, and the representatives of almost every interest in St. Louis and in Marion County enjoyed a feast where the luxuries of city and country life were profusely mingled and social congratulations mutually exchanged.

Towards evening the St. Louisans returned home—happy and safe—thanks to the citizens of Marion County and to Major R. Walker, the accomplished Superintendant of the Road.

Statistics of the United States.

We are indebted to J. D. B. De Bow, Superintendent of the United States Census, for advanced sheets of the Census Report, now in course of publication; from which we copy the following tables and observations.

In a country distinguished by its progress in every department of industry, by its unparalleled increase of population, and by the continual advance of settlement and the arts of civilization into regions heretofore uninhabited, a knowledge of its statistics is not only necessary to the statesman, but can not be otherwise than useful to those engaged in every department of industry. We regard Mr. De Bow as being eminently capable of doing full justice to the subject in hand, and trust that the complete work will be given to the country without delay.

COLONIAL POPULATION.

COLONIES.	COLONIAL POPULATION. 1701.	1749.	1775.	Increase per cent. first 48 years.	Increase per ct. per annum	Increase per cent. 2d period. 26 years.	Increase per ct. p. annum.	Increase per cent. in 74 years.	Increase per cent per ann. in 74 years.
Connecticut.	30,000	100,000	262,000	233.33	4.65	162.00	6.23	773.33	10.45
Delaware.....	.....	Incl. in Pa.	37,000	.....	.....	350.00	13.46		
Georgia.....	.....	6,000	21,000	240.00	5.00	104.71	4.00	596.00	8.05
Maryland.....	25,000	85,000	174,000	214.29	4.46	60.00	2.31	462.86	5.44
Massachusetts....	70,000	220,000	352,000	200.00	4.17	240.00	9.23	920.00	12.43
New Hampshire...	10,000	30,000	102,000	300.00	6.25	130.00	5.00	820.00	11.08
New Jersey.....	15,000	60,000	138,000	233.33	4.86	138.00	5.31	693.33	9.37
New York	30,000	100,000	238,000	800.00	16.67	302.22	11.62	3,520.00	47.57
North Carolina....	5,000	45,000	181,000	1,150.00	23.96	36.40	1.40	1,605.00	21.69
Pennsylvania.....	20,000	250,000	341,000	250.00	5.21	65.71	2.53	480.00	6.49
Rhode Island.....	10,000	35,000	58,000	328.57	6.84	210.00	8.08	1,228.57	16.60
South Carolina	7,000	30,000	93,000	112.50	2.34	252.94	9.73	650.00	8.78
Virginia	40,000	85,000	300,000						
Whites.....	.....		2,303,000						
Slaves, estimated..	.....		500,000						
All classes.....	262,000	1,046,000	2,803,000	299.24	6.23	167.97	6.46	969.85	13.11

At the beginning of the revolution the Southern colonies had therefore 812,000 white inhabitants, and the Northern 1,491,000. Connecticut was the fourth State in rank. Massachusetts and Pennsylvania were each a third larger than New York, which was even excelled by Connecticut.

Upon the adoption of the Federal Government in 1789, framed upon the basis of popular representation, more precise and accurate knowledge in regard to the numbers of the people became necessary, and such knowledge is accordingly provided for in the Second Section of the first Article of the Constitution.*

"Representatives and taxation shall be apportioned among the several States which may be included within this Union, according to

* See Introductory Chapter.

their representative numbers, which shall be determined by adding to the whole number of free persons (including those bound to service for a term of years and excluding Indians not taxed,) three-fifths of all other persons," (meaning slaves.)

POPULATION OF THE UNITED STATES.

There have been seven enumerations of the inhabitants of the United States, the periods and aggregate results of which are as follows:

	Number.
Census of 1790	3,929,827
" " 1800	5,305,925
" " 1810	7,239,814
" " 1820	9,638,131
" " 1830	12,866,020
" " 1840	17,069,453
" " 1850	23,191,876

At the end of 1854 the total population of the United States, upon the supposition that its average ratio of increase has been maintained, or nearly so, may be stated in round numbers at **26,500,000.**

The present population of the Union may be said to consist of, *first*—the number who were in the country on the formation of the government in 1789, and their descendants; *second*, of those who have come into the country since that period by immigration, and their descendants, [of this class much will be said under the head of "Nativity;"] *third*, of those who have been brought in by annexation, as in Louisiana, Florida, New Mexico, &c., and their descendants. It is sufficient to say of the last class, that Louisiana, when purchased, had 77,000 inhabitants, including 53,000 slaves; Florida about 10,000; California and New Mexico, about 60,000; and that Texas and Oregon only brought back into the Union citizens who had emigrated thither but a short time before. The number of Indians [taxed] domesticated and absorbed in the population, cannot be ascertained. The colonial population was swelled, in 1765, by the extension of the boundary to the Mississippi, and the introduction of 2,000 French residents of the territory incorporated. [Bancroft.*]

* Dr. Dowler, of New Orleans, a profound vital statistician, in a pamphlet upon the influence of republican government upon the extension of population, after showing an extraordinary decline in most of the Cities, States, and Towns of South and Central America and Mexico, remarks that "in three centuries the entire Caucasian race in both Americas south of the United States, has not equalled numerically that portion of the Union lying west of the Alleghany mountains, settled by the present generation, amid the conflicts of prolonged savage wars with the bravest and most sanguinary nations known in all history."

AGGREGATE POPULATION AND DENSITY

STATES	POPU		
	1790.	1800.	1810.
Alabama	.....	.....	.....
Arkansas	.....	.....	.....
Californ a	.....	.....	.....
Columbia, District of	.....	14,093	24,023
Connecticut	238,141	251,002	262,042
Delaware	59,096	64,273	72,674
Florida	.....	.....	.....
Georgia	82,548	162,101	252,433
Illinois	.....	.....	12,282
Indiana	.....	4,875	24,520
Iowa	.....	.....	.....
Kentucky	73,077	220,955	406,511
Louisiana	.....	.....	76,556
Maine	96,540	151,719	228,705
Maryland	319,728	341,548	380,546
Massachusetts	378,717	423,245	472,040
Michigan	.....	.....	4,762
Mississippi	.....	8,850	40,352
Missouri	.....	.....	20,845
New Hampshire	141,899	183,762	214,360
New Jersey	184,139	211,949	245,555
New York	340,120	586,75	959,049
North Carolina	393,751	478,,0	555,500
Ohio	.....	45,36	230,760
Pennsylvania	434 373	602,361	810,091
Rhode Island	69,110	69,122	77,031
South Carolina	249,073	345,591	415,115
Tennessee	35,791	105,602	26 ,727
Texas	.....	.....	.....
Vermont	85,416	154 465	217,713
Virginia	748,308	880,200	974,622
Wisconsin	.....	.....	
Terri'ories.			.....
Minnesota	.....	.....	.....
New Mexico	.....	.....	.....
Oregon	.....	.....	.....
Utah	.....	.....	.....
		5,305,937 *a* Less 12	
Total	3,929,827	5,305,925	7,239,814

a Deducted to make the totals published incorrectly in those years. *b* Persons on board vessels of war in the United States naval service. *c* A later statement from the State Department for the same year, gave Alabama a total of 144,317.

* By the State Census of Missouri, in 1848, there were 510,435 whites; 1,779 free colored; 76,757 slaves; total, 588,971. By the census of 1852, there were 623,319 whites; 2,526 free colored; and 87,172 slaves; total, 713,017. By the State Census of Louisiana there were, in 1847, 196,430 whites; free colored 19,842; slaves, 211,483, total, 427,755, and in 1852, 301,103 whites; 23,820 free colored; 261,692 slaves; total 485,312. By the Census of New York, in 1845, there were 2,560,149 whites, and 44,346 colored; total, 2,604,495. By the Alabama State Census of 1850, there were 434,392 whites, 2,491 free colored, and 340,048 slaves; total, 776,931. By the Massachusetts State Census of 1850, the total population was 973,715. The population of California, according to the

OF THE STATES AND TERRITORIES.*

LATION.				DENSITY.	
1820.	1830.	1840.	1850.	1840.	1850.
c 127,901	309,527	590,756	771,623	11.65	15.21
14,273	30,388	97,574	209,897	1.87	4.02
.....	.....	.....	92,597	.....	.59
33,039	39,834	43,712	51,687	437.12	861 45
275,202	297,675	309,978	370,792	66 32	79.33
72,749	76,748	78,085	91,532	36.82	43.18
.....	34,730	54,477	87,445	0 92	1.48
340,987	516,823	691,392	906,185	11.93	15.62
55,211	157,445	476,183	851,470	8.59	15 37
147,178	343,031	685,866	988,416	20.28	29.24
.....	.....	43,112	192,214	0.85	3.78
564,317	687,917	779,828	982,405	20.70	26.07
153,407	215,739	352,411	517,762	8.54	12.55
298,335	399,455	501,793	583,169	15.80	18.36
407,350	447,040	470,019	583,034	42.25	52.41
523,287	610,408	737,699	994,514	94 58	127.50
8,896	31,639	212,267	397,654	3.77	7.07
75,448	136,621	375,651	606,526	7.97	12.86
66,586	140,455	383,702	682,044	5.69	10.12
244,161	269,328	284,574	317,976	30.67	34.26
277,575	320,823	373,306	489,555	44.87	58.84
1,372,812	1,918 608	2,428,921	3,097,394	51.68	65.90
638,829	737,987	753,419	869 039	14.86	17.14
581,434	937,903	1,519,467	1,980,329	38.02	49.55
1,049,458	1,348,233	1,724,033	2,311,786	37.48	50.26
83,059	97,199	108,830	147,545	83.33	112.97
502,741	581,185	594,398	668,507	20.23	22.75
422,813	681,904	829,310	1,002,717	18.18	21.99
.....	.....	.....	212,592	.....	0.89
235,764	280,652	291,948	314,120	28.59	30.76
1,065,379	1,211,405	1,239,797	1,421,661	20.21	23.17
.....	.....	30,945	305,391	0.57	5.66
.....	.....	.....	6,077	.....	0.04
.....	.....	.....	61,547	.....	0.30
.....	.....	.....	13,294	.....	0.07
.....	.....	.....	11,380	.....	0.04
9,638,191					
a Less 60	b 5,318	b 6,100			
9,638,131	12,866,020	17,069,453	23,191,876	9.55	7.90

State Census of 1852, (ordered to be made part of the Census by Congress) was 224,435. The population of Wisconsin in 1836 was 11,683; in 1838, 18,130; in 1842, 44,478; in 1847, 210,546. The white population of South Carolina, by the State Census of 1849, was 280,385.

Much interesting detail, not now published, could be gleaned from the national Census, such as should receive attention at future periods. For example, a hasty view of the returns from three or four States shows: one white person in Cole county, Missouri, pauper, and one in Schuyler county, both females, aged 110 each. In Indiana, one female, black, in Hendricks county, born in Virginia, and a female, black, in Perry county, each aged 113; and another in Wayne county, also born in Virginia, aged 104. In Colleton District, S. C., a female, black, aged 111. In Lincoln county, Geo., a blind male white, aged 108; and in Wilkinson county, same State, a female white, aged 105. In the parish of Lafayette, La., one female black slave aged 130, not infirm. In North Carolina

It appears from table XII, that although the density of population in all of the States and Territories which were organized in 1840, has increased since that time, yet in consequence of the introduction of new territory, the density of population in the Union at large, has declined from 9.55 persons to a square mile, which it was in 1840 to 7.90 in 1850. A similar decline, and for the same reason, is noticed in 1810 and 1820, from the density of 1800. Although the population of the United States has increased six fold since 1790, the number of persons to a square mile of its territory has not doubled.

Density of Population to square mile in the U. S.

1790.	1800.	1810.	1820.	1830.	1840.	1850.
4.79	6.47	4.21	5.39	7.20	9.55	7.90

The population of the United States on the first of June, 1850, was twenty-three millions one hundred and ninety-one thousand eight hundred and seventy-six persons, of whom, as will be hereafter seen, nineteen millions five hundred and fifty-three thousand and sixty-eight were WHITE, four hundred and thirty-four thousand four hundred and ninety-five were FREE COLORED, and three millions two hundred and four thousand three hundred and thirteen were SLAVES. If to this number be added those who possibly escaped the enumerators from being temporarily abroad or travelling in the country at the time and were not reported, [those on their way to California were considered as already there,] as belonging to any household, or who were not sleeping in any dwelling house or out house visited—the total number may be safely set down at twenty-three millions two hundred and fifty thousand persons.*

three male whites aged respectively 108, 110 and 111; two white females aged each 106; one, 108; one, 114; one mulatto male, 106; one mulatto male, 120; one black male, 109; one female black, 115; two black females, 110; one black female 111; one mulatto female, 100; one Indian male, 125; one Indian female, 140. In Fountain county, Indiana, there is a family, four members of which are deaf and dumb; in Greene county, same State, another with five; in Howard county, twins deaf and dumb. In Marshall county, Indiana, there is a family with three boys, now thirteen years old, born at one birth; one of whom is blind. [The Prusssian Statistics show in 23 years, 1,689 cases of *three* children at a birth, and 36 cases of *four* children; the males always preponderating.] Four out of five in a family in Weymouth, Mass., are deaf and dumb. Three children in one family in North Brookfield, are deaf and dumb. In Boston, Mass., there is a female who was a mother at eleven years of age, and in 1850 was 25 years old, and had five children living.

* The assistant Marshals were ordered to visit every description of house, to enumerate persons temporarily absent, to include those alive on the first of June, although dead at the time of their visit, and to omit all the living who were born since the first of June. Thus sailors abroad and travellers belonging to the country, were to be included, and the assistants were required to enter from the registers at seaports, Mariners not already enumerated in families. Persons on

There were at that period within the jurisdiction of the Union, (see table hereafter,) *four hundred thousand seven hundred and sixty-four* unrepresented and untaxed INDIANS, swelling the aggregate population under the jurisdiction of the republic in 1850, to *twenty-three millions six hundred and fifty thousand seven hundred and sixty-four persons.*

Population of the several Geographical Divisions of the Union.

The different Slopes, &c.	1790.	1800.	1810.	1820.	1830.	1840.	1850.	Per ct.
Pacific Slope - - - - -	. . .	. . .	. . .	. . .	. . .	. . .	117,271	0.5
Mississippi Valley - - -	205,280	582,619	1,337,946	2,419,369	3,794,477	5,983,707	8,641,754	37.2
Atlantic slope - - - - -	3,708,116	4,687,725	5,824,708	7,013,154	8,633,632	10,097,785	12,729,859	54.8
Gulf, (East of Mississippi)	16,431	35,581	75,582	201,586	426,512	964,448	1,414,598	6.1
Gulf, (West of Mississippi)	. . .	. . .	1,578	4.022	11,399	23.513	288,394	1.2
Gulf and Mississippi Valley	221,711	618,200	1,415,106	2,624,977	4,232,388	6,971,668	10,344,746	44.6

board every description of vessel were to be taken, unless temporarily or accidentally in the country, and not belonging to it.

The English Census of 1851 gives a total of 82.921 persons not sleeping in houses at the time the census was taken, to wit, 12,924 sleep in barges, 9,972 in barns, 8,277 in tents and open air, 8,575 in vesssels in port engaged in inland navigation, 43,173 in sea-going vessels in port. The total no. of sailors in the Am. merchant marine may be estimated in 1853, at about 112,500. In the United States navy, the number of seamen at the period of the census of 1850, was 7,500, of whom about 6,638 were then out of the country, and of the total number, about 1,360 were of foreign birth, [from a statement prepared for this office by the Secretary of the Navy], a similar report from the War Department shows the number of the army, 1st June 1850, officers and men, 10,540, two-thirds of the latter or about 7,026 being foreign born. The number of men in the army, navy, &c., of Great Britain in 1853, was 210,474. The number of merchant seamen at home and abroad, 124,744, total, 335,218; of the 225,916 abroad, 13,722 were of colonial or foreign birth. The number of British subjects other than mariners in foreign states, was ascertained in 1851 through the State Department to be 33,775, exclusively of those in other places not ascertained, to wit, in Greece, 1,068, in Russia, 2,783, Sardinia, 1,068, Turkey, 611, Two Sicilies, 1,414, China, 649, Persia, 33, Alexandria, 155, Cairo, 85, Tripoli, 23, Belgium, 3,828, France, 20,357, Saxony, 321, Turkey in Asia, 624. Mexico, 755, &c. It would be well for the government of the United States in a similar manner through its consuls and ministers, to obtain this information in regard to its citizens at each census or oftener. At present the number of

By the above it appears that, whilst the Atlantic States have increased more than three-fold since 1790, the Gulf States, which had then scarcely any existence, have now a population nearly one-half as great as the population of all the States together at that time. The great Interior Valley of the Mississippi has, in sixty years advanced more than forty-fold; the increase being six-fold in the first twenty years and nearly seven-fold in the following forty years. The Gulf Region and the Mississippi Valley together, in 1850, have eleven-twentieths of the whole population of the Union. The statistics are calculated upon a close inspection of the maps, including, where necessary, counties only, or fractions of counties, so as to correspond with the divisions indicated by the Topographical Bureau. They will therefore be found to correspond very nearly, if not altogether, with the facts.

Population and Density of Geographical and other Divisions.

Divisions.	Population.	Density.
The States, exclusively of Territories.....	23,099,578	15.77
do. excl. of Texas and California.	22,794,389	21.29
Texas and California.....	305,189	.77
The Territories.....	92,298	.06
The Non slaveholding States.....	13,434,922	21.91
The Slaveholding States.....	9,664,656	11.35
New England States.....	2,728,116	41.94
Middle States.....	6,624,938	57.79
Southern States.....	3,952,837	15.27
South Western States.....	3,321,117	7.00
North West.....	6,379,923	16.13
North of 36.30.....	13,626,995	6.91
South of 36.30.....	9,564,881	9.90
East of the Mississippi.....	21,393,954	24.71
West of the Mississippi.....	1,797,922	.87
Pacific slope.....	117,271	.15
Mississippi slope.....	8,641,754	6.98
Atlantic slope.....	12,729,859	19.98

citizens residing abroad cannot be conjectured unless from the number of native passengers annually returning to the country. It is said that 700 to 1000 are now residents of Paris. the total number abroad may be supposed at least as large as that of foreigners in the country who are merely passing through it without the intention of remaining, and no doubt it is many times larger. Such foreigners, however, under the instructions to Marshalls, would not be enumerated in our schedules. The whole number of foreigners temporarily in Great Britain is not known, though the annual number entering the country did not exceed before 1850, an average of 18,000, swelled in 1851, in consequence of the Great Fair, to 65,233.

The Middle States are therefore the densest portion of the Union, owing, in some degree, to the very large cities existing there. The NewEngland States come next in order; then the North-west; then the South, and lastly the South-west. The non-slaveholding States are twice as dense as the slaveholding States. The States, taken together, have a density of about sixteen to the square mile. Excluding Texas and California, their density is over twenty-one to the square mile. The Territories have one inhabitant only to every sixteen square miles. Texas and California together have less than one to a square mile. Whilst nearly twenty-five persons inhabit a square mile in the region east of the Mississippi, and nearly twenty persons in the Atlantic slope, in the Mississippi valley there are only about seven persons to the square mile; west of the Mississippi, less than one person to the square mile; on the Pacific slope, one person to every six square miles! With the density of the Mississippi valley the United States would have had but 21,000,000 inhabitants; with the density of the Southern States, the number would be nearly 45,000,000; with the density of New England, 123,000,000; and with the density of the Middle States, 170,000,000.

The density of Switzerland approximates nearer than that of any of the countries named in the note to the density of Massachusetts, although still at a large remove. Belgium, the highest on the list, is more than tree times as dense as Massachusetts, and nearly ten times as dense as New England. Great Britain is denser than France; and Holland denser than either, having twice the density of Massachusetts. Brazil, Mexico and Canada are much less dense than the United States. With the density of Sweden and Norway, the least populous of any European States, the United States would embrace forty-five millions of inhabitants; with the density of Russia, over eighty millions; with that of Spain, two hundred millions; of France, five hundred millions; of Britain, six hundred and sixty millions; of Belgium eleven hundred and fifty millions. Twelve times the number of persons now live to the east of the Mississippi as live to the west of it. The non-slaveholding have a third greater population than the slaveholding States. The South has more than the South-west. The Middle States have as much as the Southern, and New England or South-western together, and a little more than the North-west.

Population and number of inhabitants to the square mile of various American and European Countries.

Countries.	Population.	Density.
United States	23,191,876	7.90
Canada	1,842,265	5.31
Mexico	7,661,919	7.37
Central America	2,049,950	10.07
Brazil	6,065,000	2.19
Peru	2,106,492	3,63
Russia in Europe	60,315,350	28.44
Austria	36,514,466	141.88
France	35,783,170	172.74
England	16,921,888	332.00
Great Britain and Ireland	27,475,271	525.19
Prussia	16,331,187	151.32
Spain	14,216,219	78.03
Turkey in Europe	15,500,000	73.60
Sweden and Norway	4,645,007	15.83
Belgium	4,426,202	388.60
Portugal	3,473,758	95.14
Holland	3,267,638	259.31
Denmark	2,296,597	101.92
Switzerland	2,392,740	160.05
Greece	998,266	55.70

JOURNAL OF INDUSTRY.

Remission of duty on Railroad Iron.

We are much pleaced to find an advocate of American industry in ZERAH COLBURN, the talented Editor of the *Railroad Advocate*, a weekly paper recently established in the City of New York. The arguments and illustrations contained in the following article, which we copy from the third number of the Railroad Advocate, address themselves to the understanding of every dractical mind, and we commend them to the consideration of all who feel an interest in the prosperity of the country. We regret that the paper on this subject in the second number of the "Advocate" alluded

to in the following article has not come to hand, as we should have been pleased to present the whole of his argument in one view. (*Ed.*

This measure, based upon arguments examined in our last issue, involves the entire principle of the national protection of industry. A partial or specefic remission of duty may be as well granted to one kind of importation as another, where both compete to an equal extent with domestic production. This brings up the question of the natural employments in which different nations should engage. If America cannot produce iron as cheaply as England, but can raise breadstuffs cheaper, any advocate of free-trade would say that each country should devote itself to what it can do best, and thus promote a large international trade. But it should be said, in reply, that it is not the developed existance of an industrial element, but the latent capacity of sustaining it, that governs the proper direction of national effort. On the same principle we might ask "what is the use of teaching a boy a trade?" As a blacksmith, old Mr. Bellows can work better and cheaper, and as a carpenter, Mr. Foreplane can build a house upon the products which the boy could raise *in the field.* But it may be that the boy, after a proper apprenticeship, can build houses or forge horse-shoes better and cheaper than either of the old artizans upon whom the community had before depended. But if the boy's support must depend in the meantime upon his ability to compete with skilful hands, he might be compelled to quit the trade before it was learned. He must evidently be supported until able to support himself. It may be, that in this illustration, an argument for industrial protection can be discovered.

At the present moment, the *variety* of our social and industrial pursuits, is one of the chief elements of the success of our Railroads. Take away the manufacturing element, for instance--what a sacrifice of capital; what a decay of industrial communities; what a crowded distressed condition of agricultural employment, and what a vast drain of the available means of the country would result.

At the present moment, it is but a *portion* of the great manufacturing interest which the advocates of remission propose to sacrifice. It is a single one of many branches of industry, *all* of which might be attacked with equal propriety. The rail-rolling interest now employs a direct investment of nearly $12,000,000, besides sustaining indirectly other large occupations of capital. It is a business which has heretofore been the football of legislation and of commercial fluctuations. The question of *any* protection, or of its *amount*, has been a continual source of ferment, and has kept capital out of the business, and kept up the cost of domestic production. It is the hazard of the iron business, as it has existed, that has made us so largely dependent on importation, and that now puts the price of iron so high, to cover the *risks* of

manufacturing enterprise. But for the great demand for rails, the discovery of gold in Australia, and the emigration of English iron workmen, all of which operated to put up the price and increase an *ad valorem* duty in proportion, the iron business would be now at as low a stage as ever. It is just now when, from these circumstances, the business pays a fair profit, and domestic enterprise is gaining confidence, that a new shock is proposed.

How soon will it be before remission is applied for upon bar iron, chairs, spikes, boiler plate, engine and car axles, tires and machinery forgings? Railroads make the market of all, and are equally interested in importing all at the lowest price. How soon with such a precedent, would it be before a retroactive and prospective remission of duties would be asked upon all importations competing with home production?

The present duty now forms 23 per cent. of the whole price of iron. If this was taken away, and with the continuance of present foreign prices, no *basis* of profit would be left to American producers. The *fear* that a diminished demand would make the foreign price even lower, would discourage all domestic capital from pursuing the business. But should the present demand continue, the production being thrown into the hands of foreign makers, the price would rise until our Railroads would pay as much as now. The result of the measure would be that a most important branch of domestic industry would be destroyed; Railroad Companies would pay as much for iron as would sustain a fair duty, and that instead of the present duty being retained in the hands of our government, it would go to foreign iron-masters. By stopping the production of wealth at home, in the shape of iron, there would be less surplus for building Railroads. If the building of Railroads was continued, a greater proportion of credit would be required, and more *bonds* would go to England to be *discounted* at higher shaves.

Such are the tendencies of this measure. Now, who are its advocates?

Foreign iron-makers hold a large interest in many of our Railroads, from having supplied us with rails, and having discounted our Rrailroad bonds as payment. These men, therefore, feel that they have a *right* in our market. They have agents in this country to discount bonds, and procure contracts for rails. Both of these branches of business should increase, if relieved from all duty. It is those of our countrymen who have been in a position to compromise most with these men, that are now advocating repeal. Men who, upon their own account, and upon that of our Railroad Companies, have incurred obligations with foreigners, are now doing the work of their creditors. The organs which have become notorious from playing into the hands of this class of capitalists, are of course assisting in the work. The power of this influence to reverse the effort of former public servants, once com-

mitted to protection;—to fuddle the perceptions of organs pretending to independence and nationality,—and the hopes of this interest to procure legislation by private and disreputable means, —all attest the power of foreign capital, and the degree of subjugation to which our Railroads and our public sentiment have been brought.

Circumstances have lately transpired which will warrant our speaking again upon this subject.

Grape growing in California.

We have contemplated California as a gold region attracting to its shores the adventurous and mammon-loving spirits from every clime, and sending forth its glittering dust to stimulate industry, and replenish the channels of commerce; again, we have regarded it as an agricultural region redundant in the production of the elements of human subsistance, but, to our view, its natural meadows, its fruits and vineyards constitute the most pleasing aspect presented by that land of marvels.

Ancient California has been long celebrated for its fruitful vines and delicious grapes, and the picture impressed upon our mind by the accounts of travelers, though somewhat marred by recent events, is still bright and pleasing to memory. The rich meadows enlivened by herds uncounted by their owners, the vineyard with its clustering grapes, the mission and the ranch, the herdsman and wine dresser all rejoicing in a clime of exceeding brightness, formed a picture far more pleasing to our imagination than that of modern California with all its gold, its agriculture and its commerce. Hence, it is gratifying to observe that grape growing, a branch of industry which constituted an important item in the economy of ancient California, is likely to become one of the leading pursuits of its present and future inhabitants.

The production of the cerials and of esculent roots already exceed the demand for those articles on the wertern coast: they will not bear transportation to the eastern States and pay remunerating prices to producers: wine and raisins will bear transportation to the most distant markets. And we are persuaded that were the people of California to direct their attention to the cultivation of

the grape, it would not be long before that region would become as famous for its wines as it now is on account of its gold.

According to the census returns, California produced 58,055 gallons of wine in 1849, being more than one-fourth part of the entire quantity produced in the United States; and we infer from the following paragraphs, which we copy from the California Chronicle, that a new impetus has been given to grape growing since that period.

In connection with a view of the improvements going on in Los Angeles county, the writer says:

"It is becoming a garden, a vineyard, and the day is not far distant when it will be to all the western coast of America, and the people still further West, what the most choice spots in Europe have long been to the civilized world. It will supply us with champagne equal to any produced in the old country, and certainly superior to the compounds manufactured in the distilleries of the United States. One gentleman, Mr. B. D. Wilson, has employed one of the best manufacturers of champagne who could be found in Europe. He has many thousand vines in high state of cultivation, has built wine-cellars and all the other necessaries for the manufacture of the best articles, and his whole crop will be turned into champagne.

Don Luis Vignes, another old resident of the country, has one hundred thousand vines, and employs at certain seasons of the year perhaps forty hands, to attend to his vineyards. A large portion of his grapes is turned into wine—other portions find their way to this market. His entire income, we are informed, he expends in the improvement of his grounds. There are many others who are devoting their attention to the same pursuit. We have tasted wine in Los Angeles, years ago, equal to almost any produced from the vineyards of France, and when the preparations for producing it shall have been generally completed and perfected, there will be little need for the juice brought over the ocean, or the concoctions now in the market.

For one wishing a life of pleasant ease, amid flowers and sunshine, fine air and beautiful scenery, in the midst of gardens such as Flora might delight to visit, and among vineyards which would bring moisture into the dust of Anacreon, and make the face of Horace look like an illuminated goblet of Teian—for such, Los Angeles is the spot. We can scarce conceive of a more delightful place, a more cheerful employment. Then there is all the fullness of country life all about one. All the comforts of the farm, fresh butter, eggs, milk, bread, vegetables, exercise, equestrian delights, open air and strong lungs, health, freedom, ever at command, and never wearying. Can anything seem more delightful?

It is with pleasure that we turn back to a contemplation of that delightful section. And it is with no little pleasure that we hear of the rapid strides it is making in healthful progress. With the county goes the city, aptly named "of the Angels." Real estate has doubled in value there within a year. Men have grown rich through their foresight in this respect, having purchased when property was very low. As with real estate, so with other species and sources of wealth. That section has been comparatively asleep, but it is awake now, and growing up into an active, rich and delightful agricultural and vine growing valley, fit for a dwelling for the best of princes—*a freeman.*"

NEW METALS FOR MACHINERY.

Mr. J. P. Kingston, Lewisham-road, Kent, has patented the combination of tin, copper, and mercury, and using the same as bearings, or linings of bearings, and for packings for machinery. In carrying out this invention, the patentee melts (say) 9 lbs. of copper, and adds thereto 24 lbs. of tin. This combination he allows to cool, and again melts it, and then adds 108 lbs. of tin; and when the tin is melted, he adds 9 lbs. of mercury, and then allows the whole to cool. The patentee remarks, that he does not confine himself to the precise quantities of the above metals given, but believes them to produce the best compound for the purposes of the invention. The compound metal, thus produced, is to be made into bearings, if for light machinery, by forming it, when re-melted, into moulds of the proper forms; and when making packings of machinery, the melted metal is run into the spaces to be packed, as has heretofore been done with other soft metal, taking care that the surfaces to which the packing is not desired to adhere are covered with smoke or other proper material, as is well understood. When lining bearings, the surfaces of the boxes or bearings (where the lining is to adhere) are first to be tinned, and the melted metal is then run; cores and moulds being used when necessary, as has heretofore been practised. The patentee claims the combining mercury with tin and copper in the manufacture of bearings and packings for machinery.

American Railway Times.

TANNING COTTON AND LINEN.

English and French fishermen have long been in the habit of tanning their sails, etc., in bark liquors, in order to render them more durable. Milliet states that pieces of linen, treated for 72 hours with an oak bark liquor, at 15°, and stretched on frames, remained unaltered in a damp cellar for ten years, while untanned linen, in the same place and for the same time, had entirely rotted. It was further shown that linne, which had begun to moulder, might be preserved from futher change by being tanned. It seems to be only necessary that the articles should be kept two or three days in warm solution of tannin. Awnings may be treated in this manner with either oak bark, or sumac—both will answer. This will afford a useful hint to our sailcloth manufacturers.

Railroad Record.

MEZQUITE GUM.

Office Superintendent Indian Affairs }
Fort Smith, Ark., Oct. 10, 1854. }

Sir,—I have the honor to bring to your notice a recent discovery of a valuable substitute for gum arabic, discovered by Dr. G. G. Shumard, Physician and Geologist to the late Expedition, commanded by Capt. Marcy, U. S. A., to the regions of the source of the Big Wachita and Brazos Rivers in the north of Texas.

The enclosed specimens done up in a tin box—3 or 4 oz—of gum mezquite, being for sample, and sent for your inspection and use. The remarkable similarity of taste, appearance, and mucilaginous qualities of this gum to that of gum arabic, induced Dr. Shumard to make some experiments, the result of which proving satisfactory, he caused some 20 lb to be gathered, and was brought home on his return some ten days past.

Upon diluting one ounce of this gum in two ounces of cold water I had a fine glutinous paste, which I have used in sealing envelopes and other packages. I have also caused it to be mixed with starch in the application to linen, and in both instances have no hesitation in saying that it is equal to the article of which it must soon become a popular substitute. In this first form the Indian Department, you will perceive, is permitted the privilege of its first official use. It will be seen that its adhesion or glutinous qualities cannot be excelled, as I have sealed up the box with it and will use it on the outward envelope. Should this gum prove as valuable in form of mucilaginous preparations for the sick, as in the two cases to which I have subjected it, and should it command one-half of the present prices paid for gum arabic, the gathering it would afford employment for, and support of thousands of the wild Indians on the Plains, and with encouragement it will become a valuable article of traffic on the western frontier.

The difference in shade ond color of the various specimens will be accounted for in Dr. Shumard's note, herewith enclosed, and to which I beg leave to refer you for further particulars.

Very respectfully your obedient servant,

Thos. S. Drew, Supt., &c.

Hon. George W. Manypenny,
Commissioner Indian Affairs.

THE

WESTERN JOURNAL

and Civilian.

VOL. XIII. January, 1855. No. II.

ARTICLE I.

Improvement of Desmoines and Rock Island Rapids.

DID it not seem evident that unjust discriminations have been made against internal commerce by the National Government while legislating to promote foreign trade, we might remain silent on the subject of improving the western rivers during the existence of the present administration. But holding it to be a duty which individuals and communities owe to themselves to protest against acts of injustice, even in cases were there is no prospect of redress, we feel impelled to recur again to this subject lest it may be supposed that we have abandoned it altogether.

We shall not attempt to discuss the power or the duty of the General Government in respect to the improvement of rivers and harbors: these topics have been exhausted. Nor would we urge a measure upon the Executive which he had fully considered and rejected upon its merits.

Owing to the variety of objects embraced in the bill entitled "an act making appropriations for the repair, preservation and completion of certain public works heretofore commenced under authority of law," which passed the two houses at the last session of Congress, it was scarcely reasonable to have expected that it would receive the sanction of a President who was known to be a strict constructionist of the constitution in respect to internal improvements.

We have delayed writing this article for some time for the purpose of examining the grounds of the President's objections to the bill referred to; but as they are not embraced in his annual message, and as we desire to publish our views on this subject in the present number, we have no time to wait for the special message

which he promises. It is not to be expected that the President in his special message will indicate any particular object of improvement, which would receive his official sanction; but we are persuaded that the most ultra disciple of the school to which the President is supposed to belong could not consistently object to the improvement of the entrance to the Mississippi at its mouth, or to deepening its channel at the Desmoines and Rock Island Rapids. There are many other obstructions to the navigation of the Mississippi and its tributaries, the removal of which by the General Government we hold to be as constitutional as the work of deepening the channel at the mouth of the river; but having regard to the opinions and policy of the present administration, we would suffer them to remain for a season, and bring all our strength to bear upon objects which we have reason to believe attainable. Besides the greater probability of success, if we concentrate our efforts upon a bill appropriating means to improve the rapids and the channel at the mouth of the river, the improvement of the navigation at these points is of more vital importance to the solid prosperity of the Western States than that of any other part of the western rivers. Without these improvements no well defined system of commerce can be established in the valley of the Mississippi, and no matter to what extent our resources may be developed, the profits of our labor and enterprise will continue to be absorbed, in a great degree, by eastern capitalists and merchants. Unless the channel at the entrance of the Mississippi be so far improved as to admit the passage of the largest class of merchant vessels, New Orleans will lose her present relative importance in respect to New York and other eastern cities; and instead of being an "arm of the sea," the Mississippi may be regarded as an *inland river* of but little practical utility in the commerce and economy of the country.

But if we regard the public press as the exponent of the opinions of the people inhabiting the region of the upper Mississippi, we must conclude that thay feel little concern in respect to an outlet of that river to the Gulf of Mexico, and care as little perhaps about the improvement of the rapids. They seem to think that railroads to New York are more to be desired than navigation to St. Louis and New Orleans. But unfortunately for their calculations, when they are just upon the eve of enjoying the benefits of their railroads, free trade between the United States and Canada

is established by treaty, giving the grain grower of Canada an advantage in the eastern markets, by reason of his locality, of from fifteen to twenty per cent. over the farmer on the banks of the Mississippi. Canada is already a large producer of cereals—the principle staple of the valley of the upper Mississippi—and stimulated by free trade with the United States and the facilities of transportation which are being established by the construction of railroads, grain growing in that country will increase to an extent that will exclude wheat and other cereals produced in the region of the Mississippi almost entirely from the eastern markets. Indeed we are persuaded that it will not be long before we hear of Canada wheat in the markets on the Ohio river.

In this view of the subject it requires no extraordinary foresight te perceive that Iowa, Minnesota, Western Illinois and Western Wisconsin must look almost entirely to the South for a market for their staples. Hence it follows that the improvement of the rapids is a work of primary importance to the inhabitants of the extensive and fertile region watered by the upper Mississippi and its tributaries, and if they are true to their own interests, they will unite as one man in urging the subject upon Congress without delay.

We learn from a highly intelligent individual who has made diligent inquiry into the facts, that about forty steamboats were engaged during the last season in transporting the produce and merchandize which passes over the rapids. It is estimated that these boats make fifteen trips during the season of navigation, and carry, on an average, two hundred tons each. The total value of the commerce passing over the rapids annually, is estimated at from thirty-five to forty million dollars; and according to the estimates of intelligent and experienced individuals engaged in this trade, it is subjected to an annual burthen of five hundred thousand dollars by reason of these obstructions.

If this extra burthen upon the trade of the upper Mississippi amounted to five hundred thousand dollars in 1854, it will be but a few years before it will reach five millions unless other and better facilities of transportation be devised and established. Nor can this be regarded as an extravagant assumption, when we take into view the immense area of the upper valley of the Mississippi which remains unsettled, but is rapidly filling up with an industrious and enterprising population.

We are informed that the cost of opening a channel two hundred feet wide and four feet deep at the lowest stage of water throughout both rapids is estimated at only one million five hundred thousand dollars. This estimate, as we understand, includes the appropriations already made amounting to about one hundred and fifty thousand dollars.

During the years 1837 and 1838 the sum of about fifty-four thousand dollars was expended in an attempt to improve the navigation of the rapids under the superintendance of Col. Lee, of the Engineer corps; but no important benefit could be expected from the application of so small a sum. The work was abandoned by the government in the year 1838, and not resumed until August, 1854, Congress having appropriated the sum of one hundred thousand dollars for its prosecution, by an act passed under President Fillmore's administration, in 1853. Nearly one half of this appropriation has been expended under the superintendance of Major Floyd, of the Engineer corps, and unless a further appropriation can be obtained during the present session, the work must be again suspended. If the Western States acquiesce in the course of policy heretofore pursued in respect to the improvement of their rivers without making a well concerted and vigorous effort to reform that policy, they will deserve to occupy no better relation to the general government than that of provinces.

But we are persuaded that the people of the West are becoming weary and disgusted with the tantalizing and vacillating policy of the General Government in respect to the improvement of western rivers, and are disposed to scrutinize more closely than heretofore the conduct of those in power.

From a review of the history of legislation during the last twenty years, it would seem that there were certain measures and abstract principles which have been regarded by all parties as gamblers regard the implements of their games. Tariff, public land, slavery, and internal improvement divided and sub-divided into branches and denominations scarcely known except to the initiated, are shuffled and played by politicians with all the adroitness of professional sportsmen at a gaming table. The combinations of these political games are so infinite and complicated that the people are not expected to comprehend them: indeed, it is not intended that they should, for the whole process is designed to deceive them.

The western people have been the victims of stratagem and political combination sufficiently often to convince them, as one might suppose, that they have been outwitted by political manœuvering, and that it is time they should devise and adopt a new code of tactics.

As an introduction to a better system of legislating, we suggest that the true friends of western interests bring forward a bill at the present session of Congress providing for an appropriation sufficient in amount to complete the improvement of the DesMoines and Rock Island rapids. There are obvious and solid reasons in favor of making the entire appropriation by one act of legislation. Contractors would undertake the work at a less price, or, the government, if it chose to do so, could carry it on with a greater degree of economy than if its prosecution should depend upon the contingency of annual appropriations; the estimates of the financial department of the government could be made upon a more certain basis; and, more than all, the benefits accruing from the work would be enjoyed by the country at an earlier day.

We are informed by the present superintendent that a due regard to the economy of carrying on the work will require the expenditure of two hundred thousand dollars per annum, and that, owing to the shortness of the working season, this is as much as could be profitably applied. Hence, it will be perceived that it will require from six to seven years to complete the work. But if left to the contingencies incident to party legislation, we conclude that few of the present generation will live to see the work accomplished.

Thus it will be seen how important it is that a sufficient appropriation should be made by one act; and, moreover, that that should be passed without delay.

We have suggested the improvement of the rapids as an object of experiment, because if the improvement of river navigation, at any point of any stream upon the continent can be regarded constitutional, this must be entitled to receive its full share of government aid; and furthermore, because, in our opinion all things being considered, a greater amount of benefit will be derived from it, in proportion to the money expended, than from any other work within our knowledge. Every State bordering on the Mississippi is interested in removing these obstructions, and it would be more likely to receive the united support of the entire western delegation in Congress than other work that could be selected.

By selecting a work meritorious in all its aspects, and excluding every other object from the bill, we shall test the opinions and sense of justice entertained in different quarters of the Union in respect to the just claims of the West. It is important that this test should be made at an early day, before any committal on our part in respect to the next presidential election. In our opinion, the West has been too often deceived and entrapped by political combinations and platforms to assist in elevating any man to the executive chair who cannot show from the record that he has been the friend and active advocate of western measures. In selecting a President we want a record of his acts, that they may operate as an estopel in case he should be tempted to betray our confidence.

We are not sufficiently acquainted with practical legislation at Washington to know what objections there may be to a bill providing for but one object of improvement; but we do know that it is a just and sound principle of legislating, and commends itself to the honest judgment of the legislator.

We sincerely hope that some man from the West will be found possessing sufficient courage to make the experiment suggested. Bring forward a bill upon the merits of the specific object, and let all who oppose this mode of proceeding be regarded as enemies to the improvement of our rivers, and we are persuaded that its passage will be certain. We shall then be able to present a simple issue to the Executive, and either obtain his sanction or certain information, that we need give ourselves no further trouble upon the subject during his administration.

In every aspect of the subject, we regard the present time as being favorable to the effort proposed. The accumulation of money in the public treasury has become a serious evil, and besides the benefits accruing from public improvements, it would afford important relief to the financial condition of the country were the surplus distributed to productive laborers. Instead of suspending public works under such circumstances, a wise government would prosecute them with more vigor, and seek new objects of improvements, if necessary, to absorb the surplus treasure.

The state of political parties may also be regarded as favorable to western interests, if western men possess sufficient patriotism and wisdom to avail themselves of the opportunity afforded by the apparent disruption of the old organizations to strengthen their own position. We do not propose the formation of a sectional

party in the West: a western party must necessarily be national. But we desire that the people of the western States should look to their own local interests, and study to develop their own resources, instead of yielding to the policy of the East, which tends, under all party changes, to absorb the profits of western labor.

It is folly to decry local parties: they are the result of local attachments and the more immediate social relations—the principal elements of patriotism. Local attachments, and even local prejudices, are to be regarded as a part of man's nature, and though the philanthrophist and statesman may sometimes rise above them, the most that can be expected of states or communities, in the present state of civilization is, that, while aiming to promote their own local interests, they will abstain from acts of injustice to others.

It is manifest that the western States have not been sufficiently watchful in guarding their local interests against the encroaching policy of their eastern neighbors. It is time that they were aroused from their state of supineness. They should, without reference to the strife and prejudices of the southern and northern States bordering on the Atlantic, determine upon a course of policy calculated to promote their own prosperity, and firmly pursue it; admitting of such modifications only as are demanded by the strict principles of justice to sister States.

Western policy should originate with western men, and be based upon western interests. The confusion which now prevails in the ranks of the two great national parties, and the total disruption with which they seem to be threatened, should not be viewed by western men with indifference. If, by adopting certain modifications, the old parties are to be sustained, or, if new parties are to be formed and organized out of the fragments, it is our duty in either event to see that the new organizations contain a fair and just proportion of western elements. The season is favorable for consultation and the interchange of views and opinions among western men. The legislatures of most of the western States are now in session, and we trust they will not allow the time to pass without improvement. Would it not be well for the legislatures of those States bordering on the Mississippi to adopt resolutions expressing their sense of the injustice involved in suspending the improvements of the rapids, and recommending their respective

delegations in Congress to place that work upon its own specific merits.

We are persuaded that the object sought to be obtained is of itself worthy of such an effort; but even if we fail in its attainment, something will have been gained by placing the recorded views and opinions of the western people before the world.

ARTICLE II.

Valley of the Ohio.

BY MANN BUTLER, ESQ.

Continued from page 48, vol. XIII. No. 1.

Grand Cession of the Northwestern Territory by Virginia to the United States—Loughery's Depot—Estill's Defeat after most gallant efforts on both sides—The Renegades, McKee and Girtys—General Combination of Indians against the Kentucky Settlements—Siege of Bryant's Station—Reputse of the Indians—Retreat to the Blue Licks—Counsel of Boone—Rashness of Maj. McGary—Disastrous Battle of the Blue Licks, in 1782—*Death of Cols. Todd, Trigg and Major Harland—Relief effected by western hostilities to the eastern frontiers of the United States.*

This year is remarkable for the first act of cession from the State of Virginia to the Confederacy, of her wide dominion in the northwest. The subject of this nascent empire in the west seems to have agitated the statesmen of the republic deeply; it actually, without stopping the military movements of the government, suspended the completion of the confederacy for a considerable time. This dissatisfaction, however, under the superintending providence of the Great Ruler of nations, as well as individuals, was most happily for the republic removed by the exalted magnanimity of Virginia. By successive cessions begun in 1781, and consummated in 1st March, 1784, the whole title of Virginia to the territory northwest of the Ohio was, with certain reservations in favor of the inhabitants, her own soldiers, and expenses incurred in the conquest of any part of the said territory, vested in the United States, "for the use and benefit of such of the United States as have become, or shall become, members of the confederation or federal alliance of the said States, Virginia inclusive."* By this

* Land Laws, p. 98. Annals of the West, p. 259.

great act of cession, the whole northwestern or right bank of the Ohio became federal territory or domain of the United States. Ample provision was made for the future division of this territory amounting to 239,345 square miles into distinct republican States and for their admission as members of the federal union, having the same rights of sovereignty, freedom and independence as the other States."* The subsequent measures both civil and military, to which this great cession gave rise, appertain to the history of the right bank of the Ohio valley, to which the attention of the reader is solicited in another part of this work.

The opening of 1782 was marked by several successful enterprises, on the part of the enemy with more than usual fatality to the whites. They were precursors to misfortunes of deeper dye, and more extensive calamity, than had yet befallen our countrymen. Among the former must be ranked Loughery's and Estill's defeats. The former officer descended the Ohio river from Fort Pitt, to join Clark in his second attack upon the Miami Indians, with 607 men. He was attacked below the mouth of the Great Miami, at a creek, which still retains the name of the unfortunate commander, and the whole party was either killed or captured.

In the case of Capt. Estill a deep interest has always been manifested in Kentucky; no less from the high character of Capt. Estill, than the very gallant and chivalric defense he made against an equal party of Wyandots. The author must in this mere general view of the valley painfully repress these personal and local details.† He will only add that Capt. Estill and eight of his men were killed out of a party of about twenty-five. A county called after the name of the gallant commander perpetuates the grateful memory of the commonwealth for his gallantry.

The hostility necessarily incident to the hunter state against the agricultural intruders, as they naturally and justly viewed our people, destroying the game, the principal source of Indian subsistence; circumscribing their hunting grounds, and attacking their towns whenever it was found convenient, could want but little additional excitement to direct their resentments against Kentucky. Yet the passions of the Indians, ever ferocious enough of themselves, are said to have been particularly exasperated at this time,

* Land Laws, and Dillon, p. 197.

† They are admirably depicted in the communication of Capt. N. Hart, and the opinion of Chief Justice Robertson, in the Appendix.

by certain refugees and traitors, by the names of McKee and the Girtys.*

These were white men, who had abandoned their countrymen about Fort Pitt, and had united with the British and Indians. "Girty, the father, was an emigrant from Ireland, about eighty years ago (1758), if report can be relied on. He left four sons, Thomas, Simon, George and James. The three latter were taken prisoners by the Indians. George was adopted by the Delawares, and continued with them until his death. He became a perfect savage—his manners entirely Indian. He fought in the battles of Kenhawa, Blue Licks and Sandusky; and gained himself much distinction for skill and bravery. In latter years he gave himself up to intemperance, and died drunk on the Miami of the lake.

Simon was adopted by the Senecas, and became as expert a hunter as any of them. In Kentucky and Ohio he sustained the reputation of an unrelenting barbarian. Seventy years ago his name was associated with everything cruel and fiend like. To the women and children in particular nothing was more terrifying than the name of Simon Girty. At the time it was believed that he had fled from justice and sought refuge among the Indians, determined to do his fellow-ceuntrymen all the harm in his power. This impression was an erroneous one. It is true, he joined the Indians after being taken prisoner by them, in their wars with the whites, and he conformed to their usages. This was the education he received; and those who were the foes of his red brethren, were *his* foes. Although trained in all his pursuits as an Indian, it is said to be a fact susceptible of proof, that through his importunities many prisoners were saved from death. His influence was great, and when he chose to be merciful, it was generally in his power to protect the imploring captive. It is due to Simon Girty to record that he saved the life of *Simon Kenton*, who had been an old comrade in Dunmore's war, when the latter had been condemned to death by the Indians.† It was his constant wish that he might breathe his last in battle. His wish was gratified; in the battle of the Thames, in 1814, Girty was cut to pieces by Col. Johnson's mounted men.

James Girty fell into the hands of the Shawnees, who adopted

* Perkin's Annals, 1st edit., 170, note.

† Life of Kenton, 228, 232, in McDonald's Sketches.

him as a son. As he approached manhood, he became dextrous in all the arts of savage life. To the sanguinary spirit, he added all the vices of the depraved frontiersman with whom he associated. It is represented that he frequently visited Kentucky at the time of its first settlement, when many of the inhabitants felt the effects of his courage and cruelty. Neither age nor sex found mercy at his hand. His delight was in carnage. When unable to walk, in consequence of disease, he laid low with his hatchet captive women and children who came within his reach. Traders who were acquainted with him say, so furious was he, that he would not have turned upon his heel to save a prisoner from the flames. His pleasure was to see new and refined tortures inflicted; and to perfect this gratification, he frequently gave directions. To this barbarian, *James Girty*, are to be attributed many of the cruelties charged on his brother *Simon*. Yet this monster was caressed by Elliott and Proctor in the second war between the United States and Great Britain, which finally extinguished all Indian power on the eastern side of the Mississippi.*

Headed by these renegades, and particularly Simon Girty, on the evening of the 16th August,† 1782, a body of Indians from different tribes extending from the lakes to the Mississippi, suddenly assembled round Bryant's station, to the computed number of 500. This place has been mentioned before, and would be briefly passed over now, but for its connection with the fatal battle of the Blue Licks. This fort was situated on the left of the present road from Lexington to Maysville, in Kentucky, immediately on the southern bank of Elkhorn creek. It contained about forty cabins, placed in parallel lines, connected by strong palisades, and was garrisoned by about forty or fifty men. "It had no supply of water within, but a very fine spring ran from the foot of the point on which it stood near to the bank of Elkhorn, at that place but a small creek.‡ The enemy suddenly showed themselves the next morning, either on the 15th or 16th of August, 1782, when

* Judge Campbell's Writings, quoted by Mr. Perkins, and the Hesperian, September and October, 1838.

† Marshall, 1, 134, says 15th; Boone, 16th, in his letter to the Governor of Virginia; others have it the 14th. Appendix.

‡ Marshall, 1, 134. There was a covered way to this, which may be well remembered, to appreciate the romance of Mr. McClung in his Sketches of this, as other points of western history. Perkin's Annals of the West, 1st Edit. 250, note.

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some of the garrison were in the adjacent cornfield, and others absent though not far from the station, with a great deal of the recklessness too characteristic of the times. Some of these in the neighborhood got safely into the fort, while others communicated the alarm to Lexington and other neighboring stations, whence assistance was immediately and gallantly furnished. The place was closely invested for the two ensuing days, as Boone says,* "from about sunrise till about ten o'clock the next day," possibly the 16th and 17th August, 1782, supposing the Indians to have reached the neighborhood of the fort on the 15th, as Marshall says. During this time the Indians kept up a continual fire, by which four men were kiiled, and three wounded. The enemy made several attempts to fire the numerous cabins with their clap board roofs and weight poles, by shooting lighted arrows at them; and even attempted with more than usual boldness for Indians, to fire the log walls of the fort with torches; but all ineffectually. Yet Marshall says that "nothing could have been more easy, than to have fired the place; as the height of their cabin walls did not exceed twelve feet, and their roofs of boards were fastened on, with cross poles, which afforded lodgments for combustible matter within hand's throw of various parts, to which they could approach, without being seen or exposed to danger."† After sustaining a loss of about thirty warriors, in their various bold, but unskilful attempts, the Indians departed on the morning of the second day, say the 17th of August; but on the fourth day, as related by Marshall, they left their fires burning, and bits of meat on their roasting sticks, which serve in the woods as substitutes for spills and other culinary utensils.

The enemy retired along the great buffalo trace, or road as the hunters termed it, by Ruddle's and Martin's stations; which had been laid waste two years before by Byrd; although this was not the direct course to the Lower Blue Licks. Indeed their retreat showed that there was no wish to conceal their trail, or avoid a battle. On the contrary, every indication had been given so opposite to the cautious and secret tactics of Indians, that they desired an encounter. While the Indians were thus ostentatiously retreating, Col. John Todd, of Lexington, Lieut. Col. Trigg, of

* Letter to Governor of Virginia. App.

† Marshall, 1, 135.

Harrodsburg, and Col. Boone, of Boonesborough, with Majors McGary, Harland and Levi Todd, at the head of about 182 men*, repaired to Bryant's station.

By the 18th of the month the detachments had assembled, and it was concluded to proceed in pursuit of the enemy, without waiting, (as is said by McGary,) for a large reinforcement presumed to be collecting by Col. Ben. Logan, on the south side of the Kentucky river. It immediately struck the more experienced of the party on the march, and particularly the wary, sagacious Boone, that the chopping the trees along the Indian trail showed a willingness on their part, to be pursued; and at the same time the contracting the Indian camp, and using few fires where they stopped to eat, indicated a design to mask their numbers. These circumstances, it was thought, called emphatically for caution; still no Indians were seen until the party reached the southern bank of Licking, at the Lower Blue Licks. This was on the 19th August, 1782. A few of the enemy were then seen by our people in front, leisurely and apparently without any alarm, retreating over the ridge. A halt of our troops was then ordered, and a council of our officers called, to adopt the best plan of operations; whether to attack immediately, or to reconnoiter and wait for reinforcements coming up under a most experienced officer, Col. Logan. Col. Boone delivered his opinion to the officers, much less skilled than himself, that the Indians amounted to three or five hundred warriors, judging from the ambiguous *sign*, which they had made on the road; that the main body must be near and prepared for action. He said that he was particularly acquainted with the ground about the Licks. It is indeed remarkable; too much like the ground of the bloody field of Braddock's defeat. The Licking river, forming an abrupt bend, includes a ridge in the north side passing between two ravines, which extend to the river like the sides of an angle, or the wings of a partridge net. Here, Boone sagaciously conjectured that the Indians had formed an ambuscade, and were lying in wait for them. To counteract the Indian plan, he proposed to divide the Kentuckians into two parties, one to go up the river as high as a small creek called Elk, to cross the river outside of a ravine on the right; the other to occupy the high ground north of the Licks, to be ready to co-operate with the right

* Clark's Papers.

wing, or else to reconnoiter the ground well, before the main body crossed the river. The council were only hesitating between the two plans, when Maj. McGary, in defiance of all subordination, raising the warwhoop, exclaimed, "those who are not cowards follow me; I will show them where the Indians are;" and spurred his horse into the river. The disorderly example was contagious among the fiery and undisciplined spirits assembled here, unchecked by any commanding genius, and the whole body passed the river without order or concert, following the road which McGary kept in front. Parties flocked off as the rough, naked and irregular surface would admit.

It must be noticed, that the ground within the bank of the river was covered with rocks laid bare by the trampling of the buffalo, which resorted to the Licks, and by the washing of the rains; it presented but a few scattering trees. Its desolate exposed condition strikes the traveler with unavoidable gloom, even at this day of advanced improvement, in the surrounding region, everywhere but in this rocky waste. The body of the troops headed by McGary, Harland and McBride formed a broken column corresponding with the ridge previously mentioned parallel with; and between the ravines, which were filled with Indians concealed by a short growth of timber. No sooner had McGary entered the woods, at the head of the ravines, than the action began with great warmth and effect, returned by our men with equal vigor, while they could keep among the trees; but they were soon driven into the naked plain between two fires from the Indians, who doubled them in numbers. Soon the conflict was discovered to be desperate on our side; nearly the whole of the men had fallen, as well as Col. Todd, Majors Trigg, McBride and Harland. The Indians were turning the rear, and rushing upon our men with the tomahawk, when the retreat was commenced. But there was but one point of escape, and that by a narrow ford at the lower part of the bend, (well known to every old traveler on this road), unless by swimming the river. Here all were rushing together, to avoid the horrors of Indian massacre, or captivity scarcely less dreadful. The execution was consequently prodigious in the crowded, disorderly retreat to the river, and in the water, for a battle fought by the pioneers of the west, who in general were as cautious and sparing of the blood of their people, and justly so, as the Indians themselves. In this extremity the unhappy fugitives were greatly assisted by a halt

ordered by one Netherland, who having crossed to the southern side of the river, called to his fellow-soldiers to fire on the Indians and protect the men in the river. The exhortation was regarded by a few, and checked the pursuit of the enemy for a short time. The Indians soon, however, crossing above and below, further flight became inevitable; and it continued for twenty miles without much more loss.

An instance of generous forgetfulness of self took place in this retreat, which ought not, for its intrinsic moral beauty, to be omitted.

It affords relief from the disgusting tale of slaughter and destruction, which occur with such baleful monotony on both sides in these border wars. Still, it is but another picture of the calamities, which have attended the hostilities with barbarians in other ages and countries; but particularly in the marches or frontiers. Scots and English, Welsh and English, the choppows of Turkomans and the forays of feudal times have ever presented the same bloody features as our Indian battles. The great lesson this truth furnishes, ought eternally to admonish the people of these States, against creating the same excitement of the fierce end malevolent passions, which a dissolution of the present glorious union of the States would inevitably minister to their people.

The incident which has reduced the author into this reflection so near his heart, was as follows. Capt. Robert Patterson, exhausted by the fatigue of the retreat and wounds received in former battles, was overtaken by a young man, of the name of Reynolds, on horseback; the latter immediately dismounted, placed Patterson in his saddle, and took his own chance on foot. Patterson escaped, but his generous friend was seized by three or four Indians, who deprived him of his rifle, and left him in charge of one of their companions, while they engaged in further pursuit. The Indian in charge of Reynolds had occasion to stoop, in order to tie his moccasin; when the latter seized the opportunity to snatch the Indian's gun, to knock him down, and seek his own safety, which he happily accomplished.

In reward for this magnanimity, Patterson presented Reynolds with "two hundred acres of first rate land;" a reciprocation of good offices, which has ever constituted the essence of virtue and true excellence of heart.

The loss in this battle was heavier than ever experienced in Ken-

tucky, or indeed in the West, excepting the disastrous defeat of Braddock, which it so much resembled both in battle ground and bloody result. Out of 182 men, who composed this party, 70 were killed, seven taken prisoners, and twelve wounded; the greater part of the Harrodsburg men fell in the front, on the first outset.* The Indian loss was reported from their towns subsequently, as having amounted to 64 killed, and a number wounded, and that four of the white prisoners were massacred to make the loss of their enemies according to their account equal to their own. This destruction, on the part of the Indians, is much to be doubted from the general fate of our encounters with our red enemies. Numbers, however, unfeeling as the remark may seem, are by no means the same criterion of loss, in an agricultural state of society, and its hunter condition. A mortality, which is rapidly replaced by the superior rate of civilized increase; would be fatal to the continuance of savage society. Yet what a triumph is this, that we can afford to *kill down* our adversaries! It converts our superiority into one of *population*, rather than of *arms*—we *breed* faster, than the Indians; and it seems, indeed, the very root of the superiority of civilized, over savage society; but it is well calculated to moderate our boasting over the rude warriors of the forest. True it is, that the plenty produced by an agricultural state of society affords the cradle for nursing the arts, the morals and literature, which at once compel the defence and the happiness of civilized life. Among the victims of this sad field, Col. John Todd and Maj. Stepen Trigg were particularly deplored for their eminent social and private worth, distinguished intelligence and urbanity of manners: qualities which are inestimable as public models and guides to society, in a forming state, like the nascent Commonwealth of Kentucky. Of Maj. Harland, it is affectingly said by Marshall, "no officer was more brave, or one more beloved in the field."† "The deaths of these men were a real public calamity, of more than common measure." Col. Boone, too, came in for his share of the misfortunes of this unhappy day, which his advice might have obviated; he "here lost his second son and very narrowly escaped with his own life." The Revd. Mr. Peck, the ablest of the pioneer biographers, not excepting Boone himself,

* Compare Boone's Letter to Gov. Harrison, in App., with Marshall, I, 141.

† Marshall I, 142.

says, "that the death of his son and the disasters of this day were never effaced from the mind of the old pioneer. Nearly forty years, after the sad event, he could not rehearse the story without tears. While on the retreat with his son, a very large Indian sprang towards him with uplifted tomahawk, and when but a few feet distant, received the contents of the Colonel's gun in his body.*

It is due to the memory of Major McGary, (who was a man of courage almost too fierce for Indian battle much more for civil society,) to state that he is said to have counselled a delay at Bryant's station for twenty-four hours, until Logan could arrive with his powerful reinforcement. This was rather tauntingly rejected by Col. Todd, as is alledged; who possibly with the honorable ambition of a brave man wished to distinguish himself against the mortal enemy, who rarely showed himself in such numbers, and not to lose the opportunity to signalize himself, by the arrival of his senior colonel.† McGary unhappily resented this treatment too fiercely; and in a spirit of lamentable revenge, determined then, to force a battle, at the hazard of any consequences to his fellow-soldiers and his country.‡

This terrible scene of bloodshed and massacre in their most horrid forms suggests a reflection, which may alleviate some of its horrors; it is that it diverted a formidable body of Indian warriors from the more settled frontiers of the United States, where they might have perpetrated tenfold more destruction, than in the sparsely stationed or forted forests of Kentucky. This is a diversion of the auxiliary force of the British, not always considered, in estimating the gallant daring of the pioneers of the west.

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* Spark's Am. Biography, XXIII, New Series XIII, 127.

† Idem, 119.

‡ The author has seen a vindication of McGary written by himself addressed to Gen. Clark in the papers of the latter, confirming these views. They likewise met with the concurrence of the late Gen. Ray, a step son, however, of McGary.

ARTICLE III.

From the U. S. Mining Journal.

The Igneous Theory, and the Earth's Natural Laws.

A correspondent of the London *Mining Journal* has been discussing at considerable length, the *vexatio questio* of the Origin of the Earth's formations, and in opposition to the Igneous Theory, has attempted to show that the Earth is producing its stratification and mineral veins by crystallization, under its present natural working laws; his arguments are exceedingly ingenious and deserving attention. He says:

"Theoretical writers have deluged us with works attempting to show that the earth is, or was, based on fiery masses, which caused it to burst in thousands, and throw up all its mountains; and they are so conversant with its present crust as to be able to point out the primitive from the secondary formations. It is this supposed interior heat they take for their ground work to account for all the different angles of stratification and sudden contortions.—They also tell us that our lodes are only cracks caused by interior combustion, and have since been filled by metallic substances, sent forth from its interior fusion, or by sedimentary deposits, though on these points they are not agreed.

"I will not attempt to follow them, soaring to celestial worlds, or even in descending to analyse the abyss of the great deep, which they appear to have so ably fathomed, but content myself by asking them what God, in his all-wise creation, left as a dead block for an everlasting memorial as a guide to posterity? Do they pretend to tell us that the earth is such, or that a single layer in the earth is stationary? Most of us are aware of the beautiful working system of man and beast, the fowls of the air, and the fishes of the sea, with the tree and all vegetation. We have long since discovered it all has working laws starting from a fulcrum, such as the heart of man, from which the leading veins spring, and is constantly branching off untill it gets to the extremities, where it is only protected by the skin. Through these veins there is a constant circulation to keep up animation, and it progresses on until it reaches the meridian of glory, when the scale turns, and it recedes until its vital energy ceases to work, when it again returns to its mother earth. The whole of the living creation and vegetation are nothing more than the earth's productions, and only exist for its season. They are but figurative emblems of the beautiful laws of the earth; then who can set her down as having a dead crust, enveloping a fiery mass, when she is known to be undergoing continual changes? In fact, she is a perpetual motion. Then look at her bounteous nature. Could she work without a fulcrum, from which her leading veins sprang the mo-

ment she was called into existence? They come forth through her various and new formations progressively, extending just as the veins extend from a child to a man, and through them the gases, waters, and electric currents pass. They are the life strings of the earth, acting through all its masses of animated matter. I again say there is not a layer in the earth in the same position as it was when first formed. They live for their season, and die to become food for the young in succession, like all creation.

"To my view, it is absurd to talk of the earth ever passing through these fiery ordeals; can we for a moment suppose God to have become wroth with his creation, and abandoned it to such a terrific element until it became a wreck of nature, when it again settled down and assumed its present beautiful working law. I believe the earth's heat to be nothing more than is required in every living thing, just sufficient to keep up the working system, and it is the same now as it ever was from the beginning. The old layers die and new ones form. It is chemical action in watery solutions, producing masses of crystallization; they collect from affinity, and form new layers. We are further told that the primitive rocks are granite. I am not satisfied on that point; granite is not plentiful, it only abounds in certain districts. It is about the lowest layer of rock that man has ever seen. It is but vague evidence as to the whole formation below being granite.

"If we could penetrate ten miles into the earth's crust, who would presume to say we should there see granite. Nearly all the fast crystallising rocks form beds or layers, and carry up mountains, and are too often termed granite, but we see also the lodes keep pace with these mountains; they are found at the very summit. It matters not what the new layers are, the lodes progress precisely as the veins do in the flesh, from the growth of a child until it becomes a man, and, like them, are only covered with a skin of alluvial soil. Every different layer is produced by amalgamation of substances that chemically combine; the softest formations often become the hardest rock. Great stress is laid by our geologists as to rocks being primitive that contain no fossil remains; which I contend is no guide, as none of the deeper layers could possibly contain fossils. Fossils are principally the remains of once living animals, that move on or near the earth's surface; when death overtakes them, or through some accident, they become imbedded in the earth to the depth of a few inches, or even a few feet, where crystallization is still going on, and a new layer forming about them, and as that one is forming others below are daily decaying. The new red sandstone is a new layer forming; its particles are nearly all of the same form; it is a mass of crystalline white quartz, turned red and cemented together by the oxide of iron daily coming up from the stratifications. I can point out where regular lodes of solid iron are coming up through

it. The direction of the layers or apparent contortions are dependent on the acting crystalline current, and not to interior fires.

"If we suppose a new layer formed a 1000 feet thick, all intermixed with fossils, this layer would only live its season; when decaying, its contents would be passing into some other layer, that had more recently commenced crystallizing or growing—the former becomes food for the latter. The fossils having from affinity imbibed certain mineral substances, causing them to take a more durable character than the rock they are imbedded in. As the bed decays the fossils come together, forming all but a layer of fossils; many such layers I can point out where the adjoining layers of more recent growth have not a fossil in them. Even these fossils are, like every other thing, although more durable than the layer they are imbedded in, they decay in time, and will never be found in deep layers or interior formations; whatever layer they are found in was once a surface formation, and the layer has not yet decayed—but it will, and as the time rolls on, and layers die, they must become extinct. For fossils we are dependent on new surface formations. All uneveness in layers, and what is generally supposed to be the wrecks of Nature, is nothing more than, I before stated, the productions of the working current of crystallization.

"The layers, or channels, commonly called volcanic rocks, are only a species of elvan; they are often found running in an east and west direction, and dipping as a lode; at other times in alternate layers with slate or other rocks. When in contact with lodes they often cause them to be productive: they grow from crystallization, as lodes and strata do, and are useful in their places. All rocks when forming, no matter what the mixture is, each kind, from affinity, have a tendency to collect together; thus we may see many substances in one layer, each endeavoring to unite in its own crystal. When two happen to amalgamate, it may be termed hybridous. Granite is a rock of this character, and as is that commonly called volcanic.

"After forty-five years' practice, and the most careful observation and investigations when excavating mines, and removing different stratifications of rocks, I cannot discover anything to indicate the earth's ever undergoing these supposed eruptions or convulsions by fire, as traditionally handed down to us, and even attempted to be borne out by the geologists of the present day, further than the gold, tin, wolfram, and a few other ores, with the debris of hills, having been washed down in the valleys, which is only the work of a deluge—an overflow of water, which certainly presents some very mysterious features, not easily accounted for.

"We see animals that fed on plants that grow only in tropical regions, now frozen up at the poles, with the tropical plants undigested in the stomach—a work of only a few hours. Then, I ask to what conclusion can we come on this subject, further than

this was only the work of a moment—an instantaneous change from heat to cold? Tradition says that the sun has changed its place in the firmament repeatedly. This is beyond our comprehension.

"It is far more likely that the earth, through some unknown means, by the working of the planetary system, upset its balance, or reversed its axis, when a great rush of water would take place. The stratum then, being soft, would be washed away, and valleys formed. The gold, tin, and other ponderous substances, then near the surface, from specific gravity, would deposite in them. We want no confirmation as to a rush of water having taken place, which laid open our abrupt cliffs and mountain sides, depositing the tin, &c., in the valleys.

"Many have come to the conclusion that the upper layers of rock are sedimentary formations.—Then I ask for a single precedent of a washed down tin layer, ever being found below the alluvial soil with new formed rocks on it. We often find deep sediments on it, but showing no indication of becoming a dense layer of rock, it barely indicates a conglomerate; neither do I believe sediment ever became rock. I am aware it will be argued that trees and fossils are found to a great depth imbedded in rocks; but these are in crystalline rocks that pass upwards, and are not sedimentary deposits.

"The gold, the tin, the tree, or even the "elk's horn," though in a good state of preservation, is not found in Cornwall imbedded in a rock. A casual shell may be found; but if these rocks were carefully examined, they would be found to be only mere patches of crystalline rock, and not of the character of the rocks in the vales where tin is found. It is not unlikely these patches were formed thousands of years before the Deluge.

I would next call attention to the different layers of crystalline rocks, noticing lime, quartz, sandstone and slate, with many others. These rocks, when crystallizing and forming beds or layers, accumulate chiefly on the upper side, imbedding fossils. The granite tribe is accumulating principally on the under side—that is, in new forming layers, and they are rising upwards, carrying gold, tin, trees and fossils with it. I have seen good streams of tin on granite so soft as not to bear persons to walk on it. This is often called decomposing granite; I believe it to be a layer of new forming granite that has carried the tin in many instances one hundred feet above its original level. No fossils will be found in these layers. When they were boring off Padstow Point, to ascertain the nature of the rock below the sand, it was found that a layer of blue tenacious clay between the sand and slate rock, which I have no doubt is a new slate layer, forming from a substance coming up from below, and not unlikely to contain fossils. All the lime tribes are fast growers and preservers of fossils, accumulating

chiefly on the upper side, which accounts for their productiveness of fossils.

Coal is said to have been once trees, or some vegetable substance, but it is as much a rock as any in the earth, it has cross heads, cleavage, and faults, and is only to be found in its own native soil. The quantity and quality is dependent on the contents of the adjoining strata; these beds only live their season, as all other rocks do. Having before hinted as to my views of the analogy between the working system of the earth and man, I will here endeavour to give a further explanation on this point. We know man is a complete piece of mechanism; he must have arteries, veins, and ligaments to perform their rounds of duty. May not the earth require the same? We have undeniable evidence of the earth containing three distinct classes of veins or lodes, probably more.

We find one class, which may be termed the mineral-bearing, and which is composed of quartz, iron, mica, lime, arsenic, sulphur, and other mineral substances. A second class is composed of tenacious clay, in which ore is seldom found to a great extent: these are termed flookans, or slide lodes. A third class is the elvan, which is a hard, dense lode, containing quartz in small crystals, often mixed with hornblende, lime or felsupar; they are seldom porous, but little water passing through them, and contain little or no mineral substances to value, although they are generally thought to have a tendency to cause mineral bearing lodes to be more productive when in contact. Then we have, also, the stratifications dipping into the earth, and in nearly every case crossing the lodes.

We see the earth hourly pouring forth her bounteous supplies, to keep up animation, which must all return to her again in rotation. Then, how is she fed? Through what source? Is it through the stratifications or lodes, or may it be at the pole or poles?

I am not skilled enough in anatomy to know what lodes may act to the earth as arteries, veins, or ligaments. I am certain that, so far as man ever penetrated the earth, in mineral veins he will still find the waters, minerals, and gaseous current, coming upwards: and one thing more is clear to me, which is—that the clay veins, no matter in what direction they run, are the railroads of the earth. They allow each portion to expand or contract, as may be required, for the growth or decay of layers or beds, which is the natural cause of faults or heaves on more dense lodes, and particularly the east and west ones.

This is a subject, I believe, but little studied, even by the practicals, as I find but few aware as to the position of lodes in the earth. I think that geological societies allow the north and south lodes to be the master ones, and have laid it down as a law that their average dip or underlie is about the angle of 22½ degrees east or west. It may be said that we find lodes dipping at every

angle—this is only caused by lodes splitting or branching off as they near the surface. We often see many lodes of nearly the same character in a mine, and dipping the same way, though at different angles; if we particularly notice them, it will be found that they are all coming to a point in depth. If they are distinct lodes, in nearly every case they can be detected when laid open.

Whatever the interior strata of this globe may be, it is clear, from the known law of lodes going into the earth, that there is something far more systematic in its working than is generally supposed; and when we contemplate the working system of man, and the beauty of creation, we have every reason to come to the conclusion that God, in his wonderful works, left this globe the living type of mechanism, composed of different portions of matter, to which we can neither add nor diminish; and whether the average dip of North and South lodes is 22½ degrees, or even ranging up to 45, it would not alter the law—it only leaves a larger space or centre for the laboratory of Nature; either would show that these lodes or veins are the working sources of the earth, renewing and reproducing every thing over and over for ever, for the support of man and all creation—through them, everything requisite is brought to or near the surface, within the reach of man.

It would be absurd to suppose that God created a world composed of everything necessary to make it a complete piece of mechanism; and after some 8,000 or 10,000 years it is found that man had dug up all the gold and other metals, with all the coals and mineral substances; when the then existing creation would suddenly find themselves deprived of all these most essential parts of the earth's formations. This is not likely to happen, as it all returns to the earth to be reproduced, certainly not in the same situation, but it may again form in others far more convenient. If we suppose that the miners of Cornwall had dug out all the copper on the backs of the Cornish lodes, that will not deprive the world of copper; new formations will be found, or these lodes may be compared to a tree maimed in the upper shoots, when fresh branches will spring from below and again bear its fruit. It must be borne in mind, that if damaged lodes do not shoot out side or parallel branches, they may cause ores to accumulate some 50, 100 or even 500 miles distant.

Man has dug iron from the earth as long as we have a record of his existence, still we have no deficiency of supply, neither are we overstocked, and who will deny that the iron used by the ancients is not again in the earth, and even in our present lodes. It was thought that the ancients had deprived us of the great deposits of gold, but see the discoveries of the present age: yet we can not keet it; the bulk of it will return from whence it came. In no age will the earth refuse to yield her supplies. Man at times may be negligent and deficient through want of perseverance,

which is the moving power. The caverns found in lime rock are nothing more than ventilating passages for water and gases produced in the earth. It is to be compared to air placed under water: in its passing up it would form cavities, but when the air ceases, the water, from its fluid nature, closes; but the earth's gases and waters are a continual source that flow, and must and will have vent, though I believe it to be like the fishes in the sea, or animal and vegetable creation; the former, though immersed in a fluid of immense weight, neither see it or feel its effect. The animals and vegetables, immersed in an atmosphere are precisely the same; the only effect is, when a strong wind blows they meet resistance. It is the same with fish in strong currents of rivers or tides. Gases and water meet the same resistance in the earth; when passing through rapid crystallizing layers they have to struggle hard. These checks are often visible to man. Hence, we see everything working under the same law, whether it be animals, vegetables, crystalline rocks, lodes, or deposits of ore. They come to perfection agreeable to the congeniality of the elements they are in.

I wonld further notice that every ponderous substance is carried uppermost; see gold, tin, lead, antimony, iron, &c., and even the fruits of vegetation. The acorn and the grain of wheat will send a thousand per cent. upwards. Copper, being one of the lightest ores, is often found deepest; it is on these grounds that I oppose deep sinking in search of productive mines, and ask for precedints. Even the extraordinary paying copper mines show extra gossan at shallow levels, or produce the ore within 40 fms. of tne surface, and all other productive mines do it long before they attain that depth. The larger the deposite of ore, the deeper the ore is likely to continue. A casual bunch of ore might be first found at an intersection 100 fms. deep, but show me precedents as to their being over remunerative. I believe the heart of large bunches of ore is obtained in nearly every case before reaching the 150 fm. level, and are all but extinct when they reach 300 fms.; this depends much on the bulk and age. The law of lodes requires watchfulness and study; far more than the working system of man. Lodes may be found in every grade of life, the young, the middle aged, and the time worn. As they near the surface they are to be compared to the veins in the arms of a man, branching into the fingers, and for deposits of ore dependent on the stratifications, directions, and intersections, which bring the interior magnetic current to act on one point, producing powerful chemical action.

I believe all our lodes contain ore of some kind in their season, which is mainly dependent on their age and adjoining stratifications. They are tender and gossany in early days, bear their fruit in middle age (the ore), decompose when old, and the gossan becomes hard capel; these changes are dependent on the acting current which causes the growth or decay of the adjoining stratum.

I beg, in continuance, to notice that mineral crystals are as flowers on trees, and chiefly found in young lodes near the surface. In most every case the ore is then of good quality; at middle age, it is in greater quantities, but not equal in quality, with the exception of about the heart of the bunch. In old lodes, the ore is passing off in solution, reducing in quality and quantity, often depositing native copper, when in contact with any layer containing magnetic iron. Ores, when depositing in lodes, from their own chemical action, decompose the sides in the most congenial places, making room for their deposits; hence we see swells in lodes where there are large bunches of ore.

In decaying lodes, we often see in vaughs, or caverns, the prints of cubes and other crystals that were once there, but now decomposed and gone; this shows the matrix to be more durable than these crystals of ore.

As a proof of the crystallization of rocks, I may remark that I have seen thousands of six-sided quartz, formed on the sides of levels, after they had been excavated; and once in a level that I assisted to drive through, a large quartz lode; and on re-opening it after the expiration of six years thousands of quartz crystals had grown, 2 in. long, and as large as straws. On rubbing them between the hands, they again became a liquid. I have no doubt but hundreds of old practicals have noticed quartz growing, as I have often pointed them out to mine agents in my rounds.

Carbonates of lead will grow in strong lead lodes 1 inch long in 12 months. I have seen a stone taken from a strong lode, productive of carbonates of lead, when brought to the surface, and kept in a damp place, shoot out white carbonates, as branches will for a season from a detached piece of green wood. Many specimens of young crystallizing rocks could be detected in the short space of 7 years, if carefully looked for.

I saw in Treburget United, not two years since, hundreds of shales of carbonate of iron adhering to the sides, and even to a piece of wood floating on the water; this mine has not been opened above 7 years. We are told that native silver has been found in mines adhering to timber, and crystals of tin to leather. We have also the members of the Cornish Geological Society's authority to say the elk's horn has become the oxide of tin; and the horn is in their possession, and is open to inspection. The horn lay imbedded in the alluvial tin layer, previously washed down from the mountains, where the tin lay slowly dissolving, as all substances do, when in solution and passing on, it came in contact with the horn, when the lime caused a chemical action, and it dissolved, and gave place to the oxide of tin, where I am told it has taken the form of crystals of lime. Here is a double action, as there can be no doubt of its first passing in solution through the lode, where it crystallized, and became an oxide of tin before the Deluge, when it was washed into the valley; it there

again slowly dissolved, and passed off in solution, and, re-formed in the elk's horn, again producing the oxide of tin.

Any person by calling on Mr. J. T. Tregellas, of Truro, may see with him a lot of crystals said to be felspar, but they are not unlikely to contain a large portion of lime: many will be found of their original substance, and others all oxide of tin—some a quarter, others half; in fact, they are in every grade, proving their first passing into a solution and re-crystallizing, a transition of substances.

At Rinsey Mine a transition of iron is taking place, and the granite alongside the lode is becoming iron. Hundreds of other proofs could be produced, if required, of the solution, transition, and re-crystallization, of mineral substances; had we only these proofs, it would have been sufficient to show that rocks live and die, and are re-produced by crystallization; and at low temperature native copper is produced in 12 hours, when no man can detect a warmth in the water: heat may have a tendency to produce it quicker, but it is only like a hot bed—it is forced, and is not produced in its native element. In fact, the whole of the mineral crystals are living proofs of the capability of rocks to form by crystallization; and the earth is still performing and showing its beautiful working law every day, and producing the crystals within 10 fathoms of the surface, without a heat preceptible to man, even when he is alongside of them. Next, look at the stratifications; if ever so dense, and there happen to be a vacancy, commonly called a vaugh, or cavern, in it will be found the natural crystals of that layer or bed of rock, brought up to perfection. Look at the Cornish quartz, more commonly called the Cornish diamond, found in Tintagel Cliffs, in vaughs imbedded in a black, sooty substance. We also see able chemists, if they will allow me the term, using their hot-beds to produce crystals from mineral salts. I think these are ample proofs that all our rocks are, and ever were, produced from crystallizations, requiring no further heat than the rocks of Cornwall now contain to produce every substance therein found.

Can any one for a moment suppose that the large cubes of sulphuret of iron, or mundic, so often found, were formed as now found, when God said, "Let there be a world," or that, at any later period they sprang into existence in the twinkling of an eye? It is a work of time—it lives and dies.

It would be highly absurd to say that all the gold found in Australia was formed in nuggets, as now found, when the world was created. It is said by some that it exists only in its metallic state. I contend that gold is like all other ores—continually passing through the earth in solution; and when the seed is sown in congenial ground, there it will collect and form a body; and every other ore collects in the same way. It may be compared to the oak of the forest—one of the longest livers when formed. I

am not aware that any man can detect these ores by the eye in their primitive state, when passing on in solution through rocks, or through waters, or in passing off to the atmosphere in gas. Still, it unites and forms a body when in its own element, and met by a relieving flux, just as copper when met by metalic iron, or the tin when met by the lime in the elk's horn, and without any perceptible heat; though it is rather difficult to come to a conclusion as to how ores accumulate—whether condensed from gases, and formed on the outside of crystals; or whether, like the tree, it inhales its supplies from the rocks through which lodes pass.

Judging from what I have seen of the carbonates of lead shooting from a stone, detached, and deposited in a damp place on the surface, and the needles of antimony, also thousands of quartz crystals seen shooting out from the sides of levels driven in apparently clay or slate rock, I am inclined to think it much like a tree, first springing from the seed, when it draws its supplies from the lode and adjoining rocks, until it reaches its climax.

Nature clothed everything with its own working law, which carries it to perfection; but these are things which require watchfulness and study, and will not be detected until the most able of the young practicals become chemists, and employ their leisure hours in their own laboratory.

Ores in their primitive state are the acids or salts of the earth. They are passing through all lodes and stratifications in which they are found deposited, and no doubt, could be detected by the able chemist. This is the field for cultivation, to develope the natural and true laws of minerals. After these remarks, it would be a waste of time to follow further the interesting work of crystallization.

I will next endeavor to show that the different ores of Cornwall are the productions of different eras. The oxide of tin, wolfram, and a few other substances, with a small portion of gold, was to perfection long before the Deluge took place, and by it was brought down into the valleys; but we see little or no copper, though we are often told that the ancients did not know copper, and where they came to it they abandoned the mine, or threw it away to build hedges and make roads. I have myself seen hundreds of places opened that were never worked since the days of the Druids or Romans, but I never saw one left by them worth working for copper. As to its being used to make roads or hedges, I never saw a single instance of it left from the ancients, but I see too much put for that purpose in the present day. If I was to offer 10*l* for the man that could prove he ever profited 100*l* for copper found in hedges or roads of 500 years standing, I think there would be no claimant. I firmly believe our lodes contained little or no copper when first worked for tin; it is of far more recent

growth. We can now find copper in a thousand lodes in Cornwall and Devon, ranging within from 2 to 20 fathoms of the surface. It is a singular thing, if copper then existed, that the ancients, after opening extensively on every side, should never have laid open a good copper mine.

To be continued.

ARTICLE IV.

The Cotton Trade.

By C. F. McCAY, Professor in the College of South Carolina.*

The events of the past year have shown the utter insignificance of Russia as a commercial power. With all her ports blockaded on the Baltic, the White and the Black seas, the prices of merchandise have been scarcely disturbed. The demand for cotton, that great barometer of Commerce, has been undiminished. Though the peace of Germany, Sweden, Greece, and Italy had been threatened, no falling off in the English exports has been experienced. All the operations of Commerce move on undisturbed, just as they did in our war with Mexico. The price of hemp, tallow, sheet-iron, and a few unimportant articles, has been affected, but no great important interest in the commercial world has been seriously injured.

The consumption of cotton has, indeed, slightly declined in England, France, and on the continent; but so small is this decline, that it is fully explained by other causes well known and understood. The deliveries to the trade at Liverpool have only fallen off from 1,430,000 bales to 1,424,000 bales, up to the 7th of October. At Havre, the consumption was 27,000 bales less than it had been in 1853 at the end of the first half of the year, but part of this loss has since been regained; the exports from the United States and England to the continent of Europe have decreased more than either of these amounts; but this decrease is not over 100,000 bales.

If war, the deficient harvests in England, France, and Germany, and the consequent high prices of provisions, be considered, the wonder is that the decline in the consumption of cotton has not been larger from this cause alone than has been really experienced.

Russia may be a great country in territory, or population, or agricultural resources, but as a commercial power she is utterly insignificant.

The events of the past year have also shown the immense benefits which have already been received from the mines of California and Australia, and go far to establish the fact that a sensible appreciation in prices is already observable, from the large supply of the precious metals.

In former wars, the extra demand for specie for the military chests of the armies disturbed very much the currency of the war-making powers, and while it depreciated property generally, raised the price

* From Hunt's Merchants' Magazine.

of wheat and flour and other articles of this kind. The present war though not less expensive, has hardly been felt in the monetary world. The extra expenditures of England have exceeded fifty millions of dollars; of France, about the same; of Austria, a large sum; and both Russia and Turkey have had heavy outlays of an extraordinary character. Amidst all, the price of English consols has not fallen over five or six per cent, the circulation of the Bank of England has not materially declined, the specie in her vaults has decreased only four millions sterling, and the demand for money has not largely increased either in Europe or America.

The rate of interest was, indeed, raised considerably in England, but this was due mainly to their deficient harvests. The stringency in their money market produced its effect in the United States, on account of our close connection with Liverpool and London, and of our large over-trading and borrowing in the preceding year.

The extra demand for coin for the support of distant, large, and expensive armies, has thus had but a slight influence on Commerce, and this can only be explained by the large supply of gold from the new fields which America and Australia have opened to the world.

The two facts that have now been referred to are of great importance in considering the demand aud supply of cotton. If Russia is of small influence as a commercial power, the slight decline in the consumption of cotton during the past year is not due to the war; and if the extraordinary supply of the precious metals suffices to meet the extra demands made by distant and expensive armies, the fair and steady prides we have received for our exports have been due to the regular and legitimate demands of trade to meet the actual wants of the world. And if the war only affects, in the slightest degree, both the demand and the rate for cotton, our expectations for the coming year may be based on the usual circumstances that have heretofore influenced the consumption and the price of cotton.

In the United States, the purchases made by the Northern manufacturers have declined in 1854, if we compare them with 1853. This falling off is over 60,000 bales. But the amounts used by the factories have not probably been much less than during the preceding year. The tightness in our money market this summer compared with last, has made the Northern manufacturers lay in but small supplies, so that the stocks in their hands are very low. The prosperity, North and South, of all branches of the cotton manufacture, forbids the belief that the wants of 1855 will decline.

The average consumption for the three years ended				1845, were...bales	354,000
"	"	"	"	1848, ...	461,000
"	"	"	"	1851, ...	469,000
"	"	"	"	1854, ...	628,000

650,000 bales will be needed for 1855, against 611,000 and 671,000 for the last two years.

The deliveries to the trade at Liverpool, which constitute over 95 per cent of the English consumption, have suffered no decline for the present year. In the earlier part of the season they were less than in 1853, but thls loss has been entirely recovered.

On the 30th of June these deliveries were 904,000 bales, against 989,000 of the year before. During the months of July and August

this deficiency remained about the same. On the 14th of July it was 90,000 bales; on the 18th of August, 86,000; and on the 25th, 89,000 bales. About this time the favorable influence of the fine harvests began to be felt, and the deficiency has lessened every week since. On the 9th of September it was 58,000 bales; on the 23d, 37,000; and on the 30th, only 20,000 bales. On the 13th of October the consumption for 1854 was 1,456,600 bales, against 1,460,000 for 1853, exhibiting a decrease of only 4,000 bales. For the whole year we may expect no decline, and as the consumption of 1853 was 1,904,000, against 1,861,000 bales of 1852, the amount for 1854 will be above rather than below 1,900,000.

For 1855, even supposing the war to continue, we may anticipate an increase. The favorable harvests in England and on every part of the continent, and the moderate prices which are likely to prevail, will increase the demand for cotton goods. The prosperity of the agricultural interest, as well as every department of manufactures, will exert a favorable influence. In every part of the world, excepting only the United States and China, the demand for the English exports will be large, and in these two countries only a slight check will be experienced. The scarcity of money, the uncertainties connected with the war, the hasitating and undecided position of the German States, will be drawbacks on the other side; but, taking both into consideration, we may reckon the wants of Great Britain as not less than two millions of bales for 1855.

For France the consumption for the coming year will be as large as in any former year. The slight check it has received during the past season has been owing to the high prices of food. And though these will not be low in the coming year, because the supplies of the last crop have been entirely exhausted, and because the war will interfere with the usual receipts from the Baltic and the Black Sea, for 1854, the exports of American cotton to France have been 374,000 bales against 427,000 for 1853; and though both these are larger than for 1852 and 1851, the universal prosperity of France since the accession of Louis Napoleon to the Imperial throne, authorizes us to base our expectations for the coming year on the past two, rather than on the preceding results. For 1855 the demand for American cotton in France must therefore exceed 400,000 bales.

On the continent there has been a decline, in consequence of the war and the deficient harvest. Part of this will be recovered, but a deficiency in our exports to the north of Europe will still exist. Russia is, indeed, of small importance, still she wants some of our cotton. The decline in the English outgoings has been greater than ours, because nearly all the Russian imports were received from England, and not from the United States. To the whole continent, omitting France, our exports have fallen off 23,000 bales, while from Liverpool alone they have gone down from 223,000 to 156,000 bales. As the amounts for the whole year were 350,000 bales from the whole of Great Britain, the deficiency for 1854 will be fully 100,000 bales. The continental supplies exported from America and England during the year 1852 were 636,000 bales; for 1853 they were 715,000 bales, and for 1854 about 590,000 bales. For 1855 the moderate

prices and abundant harvests will probably make up half this loss, and thus raise the demand to 650,000 bales.

These several estimates for the coming year make a total demand for 1855 of 3,700,000 bales against 3,475,000 for 1854, and 3,717,000 for 1853, as in the following table :—

	Consumption.	Estimate.	
	1853.	1854.	1855.
Great Britain ..... bales	1,904,000	1,900,000	2,000,000
United States.....	671,000	611,000	650,000
France, of United States cotton	427.000	374,000	400,000
The continent, of U. S. and East India cotton	715,000	590,000	650,000
Total	3,717,000	3,475,000	3,700,000

The supplies for 1854 from the East Indies have fallen off largely from 1853. They were indeed excessively large in that year, compared with former years, having reached 485,000 bales, on account of the good price of cotton and the civil war in China. In Liverpool, on the 14th of October, the decline had reached 68,000 bales, and for the whole year the deficiency at London and Liverpool may reach 130,000 bales. But even with this falling off, the imports from the East Indies will exceed the amount of any former year. The average receipts from 1848 and 1849 were 205,000 bales ; for 1850 and 1851 they were 318,000, and for 1852 and 1853 they were 354,000 bales. The probable troubles at Canton, on acconnt of the Chinese rebellion, by lessening the demand in that part of the world, will tend to divert the Indian cotton to Europe ; but this effect will be counteracted by the moderate prices, and the English receipts will not probably vary much from 350,000 bales.

The English imports from Brazil and the West Indies are small and stationary. They have been between 100,000 and 200,000 bales for every year of the past seven. The receipts at Liverpool, up to October 14, were 65,000 bales against 63,000 of the preceding year ; and as the total for 1853 was 141,500, the amount for 1854 will not exceed 150,000 bales. The average for the last five years has been 152,000 bales, and for 1855 this average may be anticipated.

In Egyptian cotton the average for the last three years has been 121,000 bales. For 1853 it was 105,000. For the present year there has been an increase of 24,000 bales, making the probable amount for 1854 as high as 130,000 bales. This limit will not probably be reached for the coming year, on account of the war. This has interfered with the planting and gathering of the present crop, and, therefore, with the expected receipts for 1855. From Egypt, and Brazil, and the West Indies, the supplies for the coming year will not probably reach 250,000 bales, against 245,000 for 1853, and 347,000 for 1852..

The crop of the United States exhibits a decrease for 1854 of 333,000, compared with the preceding year. Part, but not all, of this decline will be recovered in 1855. From South Carolina a considerable increase is expected. The excessive drought of 1853 did more injury than the one we have this year experienced. The late frosts in April interfered with the early growth of the plant, but the beautiful weather in May and June fully made up for the backward spring. The drought of July and August was relieved by the partial

showers, which have given to many planters most excellent crops. The lowlands and bottoms have produced very well. The storm on the 8th of September destroyed not a little by blowing it off the stalk, as a large amount was open in the fields, under the influence of the hot unclouded sun of August. The deficiency on the poor uplands, though not so great as last year, will be considerable. Yet, as the killing frost has come very late, every boll that could come to maturity has opened, and the weather for the whole of October did not interrupt the picking a single day. From South Carolina an increase of 10 or 15 per cent may be expected. From Georgia the prospects are not so favorable. The drought was more severe and protracted. The excessive heat of July and August made the atmosphere drier than it would otherwise have been, and the forms fell from the stalks very largely. On the rich wet lands production has increased, and on some favored spots in the uplands fine fields may be seen. But generally the crop is short, though not so much so as it was last year. The shipments from Columbus and South-western Georgia to Savannah will be increased by the extension of the railroads in that direction. The receipts at Savannah will thus probably be higher than last year, though the increase will be small. From Florida the promise of good crops is very general, and an increase may be expected, notwithstanding the extension of the South-western Railroad to Americus. In eastern Alabama the drought has been very severe, but on the prairie lands, and on the Tombigbee and the Tuscaloosa, the gain will more than balance the loss on the Alabama River. At New Orleans, and throughout the Mississippi Valley, the storm on the 22d of September was long continued, and very disastrous. The drought and heat which injured the Atlantic States did much damage on the uplands. But so numerous are the rivers, so wide the bottoms, so late the frost, that the favorable influences much exceed the adverse. From Texas the reports of a fair crop are uniform and invariable, the drought having done no damage on the Gulf. From the whole United States the crop may be estimated at 3,200,000 bales, as follows:—

	Receipts.		Estimate.
	1853.	1854.	1855.
Texas.....bales	86,000	110,000	120,000
New Orleans.....	1,581,000	1,347,000	1,500,000
Mobile.....	545,000	539,000	550,000
Florida.....	179,000	155,000	160,000
Georgia.....	350,000	316,000	325,000
South Carolina.....	463,000	417,000	475.000
Other places.....	59,000	46,000	60,000
Total.....	3,263,000	2,930,000	3,200,000

These receipts with the English imports from Brazil, Egypt, and the East and West Indies, will make the whole supply 3,800,000 bales, against a probable demand of 3,700,000.

As the stocks on hand are lower than last year, this slight excess of supply will not produce any great influence in depressing prices. The amount held in Liverpool, October 13th, was 791,000 bales against 819,000 of the year before, and the stocks in our northern and southern ports on the 1st of September, showed precisely the same figures in 1853 and 1854.

Nor is the stock on hand in all parts of the world excessive. It was 941,000 bales at the end of 1853, against 837,000 in 1852, and 757,000 in 1851, and 798,000 in 1850. For the 31st of December, 1854, it will not probably reach 900,000 bales.

The price now (November 2d, in New Orleans,) is 8¾ cents for middling, and as this is above the average of the last fifteen years, it can scarcely be maintained. The low rates of freight which are certain to prevail for the coming winter, on account of the total cessation in our exports of grain and flour, and the depression of the shipping interest at Liverpool, will tend to keep up prices at our sea-ports.

For the ten years from 1840 to 1849 we exported 7,116.000,000 pounds of cotton, which was valued at the custom-house at $545,000,000, or at an average price of 7¾ cents per pound. For the last five years, the advanced price of our exports has raised the average to 8¼ cents. With a supply above the probable demand, and with a fair stock on hand, this price cannot well be exceeded. But no decline below this average can take place without encouraging consumption, so as to restore these rates for middling cotton.

The prosperity of the South still continues. Our planters have fair crops and fair prices. Neither is large, but both are calculated to cheer and encourage. From 1850 up to the present year, the rates for our great staple have been good, and our crops large. In the five years ending 30th of June last, our exports have sold for about $471,000,000, against $276,000,000 from 1845 to 1850, and $269,000,000 from 1840 to 1845. The present season is not so promising as the last five, but still its rates promise to be remunerative, and its returns abundant. The excessive high prices of land and negroes, which have been prevailing, cannot be maintained, but no disastrous decline or depreciation is upon us. If we are wise, and diversify our planting, by raising those other agricultural products which now bring such fine returns to the farmer, and avoid the excessive production of cotton, this decline may be easily stayed, and our prosperity not only preserved but advanced.

WINDOW-GARDENING.

There are a few golden rules to be observed during winter, of which may be enumerated the following: Water all plants that require it in the morning; leave no water in the saucer of any plant after the whole has become saturated through; never water by dribs, but give the whole a good soaking, or the consequence often is that the top of the mould is wetted, while the lower, containing the roots, is dust; sponge over the foliage as often as it becomes dusty; take a pointed stick, and, once in a while, stir the surface of the soil, but not deep enough to disturb the roots; this acts the same part as hoeing in summer, and tends vastly to the health of the plants. Give each plant space enough for air to circulate around it, if possible; let it have the benefit of a little fresh air at times.

ARTICLE V.

St. Louis Public Schools.

The decay and downfall of the great nations which have passed away is attributable, in a good measure, to the vices of populous cities: and it is a fact which should be impressed upon every American mind that the vices of a civic population are more dangerous in Republics than in communities governed by monarchical institutions. Hence every American citizen should be admonished that as he loves his country, and desires the perpetuation of its institutions, he should discharge his whole duty in respect to the education and moral improvement of the population of our great cities.

Much depends upon an early and well-planned beginning, for vice is a plant of vigorous growth, and if allowed to take root and spread forth its branches, in a little time its eradication becomes impracticable.

In connection with this subject, we are pleased that we can say in truth that the citizens of St. Louis are entitled to the highest commendation for the liberality and public spirit manifested in building up and establishing institutions calculated to ameliorate and improve the physical, intellectual and moral condition of all classes.

In the second volume of the Western Journal we published a condensed history of St. Louis, in which we noticed most of her religious, charitable and literary institutions; but failing to obtain a full account of the public schools, we mentioned but few facts relating to them. Since then, the public school system of St. Louis has been extended to a degree that entitles those under whose auspices it has been developed to the praise and gratitude of the community. The following facts touching the history and present condition of this institution are taken from the first annual report of the General Superintendent, JOHN H. TICE, Esq., to whose sagacity and devotion to the cause of education the present prosperous condition of the public schools of St. Louis is in a great measure attributable.

HISTORY OF THE ST. LOUIS PUBLIC SCHOOL LANDS.

"The act of Congress, of 13th June, 1812, makes it the duty of the United States Surveyor General in Missouri Territory, "as soon as "may be, to survey, or cause to be surveyed and marked (where the "same has not already been done according to law,) the out-boundary

"lines of the several towns, or villages of Portage des Sioux, St. Char-"les, St. Louis, St. Ferdinand, Ville a Robert, Carondelet, Ste. Gen-"evieve, New Madrid, New Bourbon, Little Prairie and Arkansas, so as to include the out-lots, common field lots, and commons, thereto respectively belonging."

The provisions of this law have never been complied with, and perhaps never will. The out-boundary of St. Louis has never been run, and there is too great a pecuniary interest involved ever to permit it to be run, without a struggle to defeat it.

The same act provides: "That all town, or village lots, out-lots or "common field lots, included in such surveys, which are not rightfully "owned or claimed by any private individuals, or held as commons, "belonging to such towns or villages, or that the President of the U. "S., may not think propor to reserve for military purposes, shall be, "and the same are hereby, reserved for the support of schools in the "respective towns or villages aforesaid; provided, that the whole "quantity of land contained in the lots reserved for the support of "schools in any one town or village, shall not exceed one twen ieth "part of the whole lands included in the general survey of such town "or village."

The lands "rightfully owned or claimed by private individuals," are defined by the same act to be those "inhabited, cultivated and possessed, prior to the 20th day of December, 1803," (the day that the French commandant gave possession to the United States,) which are confirmed to the claimants respectively.

A supplementary act to the above was passed by Congress on the 26th of May, 1824, which provided, "That it shall be the duty of "the individual owners, or claimants, of town or village lots, out-lots, "and common field lots, in, adjoining, or belonging to, the several "towns and villages, whose lots were confirmed by the act of Con-"gress of the 13th of June, 1812, on the ground of inhabitation, "cultivation, or possession, prior to the 20th day of December, 1803, "to proceed within eighteen months after the passage of this act, to "designate their said lots, by proving before the Recorder of Land "titles for said State and Territory, the fact of such inhabitation, "cultivation and possession, and the boundaries and extent of each "claim, so as to enable the Surveyor General to distinguish the private "from the vacant lots." The act then provides, that after the expiration of term of eighteen months allowed for proving such facts, the Surveyor General shall proceed to survey, designate and set apart, to said towns and villages, respectively, so many of such vacant town or village lots, out-lots, or common field lots, for the support of schools in said towns or villages, as the President shall not have reserved for military purposes, prior to that time. On the 28th of January, 1831, a further supplemental act was passed, relinquishing all the right, title and interest of the United States, in and to the town and village lots, out-lots and common field lots, in the State of Missouri, reserved for the support of schools, in the respective towns and villages, to be sold or disposed of, or regulated for said purpose, in such manner, as may be directed by the Legislature of said State.

Such are the provisions of the grant, but the extent of it, in St. Louis is far smaller than generally supposed. It is true, that origi-

nally, large quantities of lands, being without claimants, were supposed to be embraced in these grants, and claimed as school lands, but for the greater portion of these, claimants have since appeared, who have successfully prosecuted their claims. The remainder, not swept away by private claims, has been seized by individuals, who have only been dispossessed by protracted and expensive litigation, or by heavy compromises, while others still hold adverse to the school title. Some of these pretend to claim by inhabitation, cultivation and possession, under French and Spanish government; others under pre-emption, and others again, under locations of New Madrid certificates.* After nearly twenty years litigation, less than fifty acres have been obtained by the schools, nine-tenths of which has been by compromises. The expense involved by litigation alone is not short of $50,000, and still requires the services of a Counsellor, at an annual salary of $1,000. With the exception of one-quarter block on Fourth and Market street, and a strip 317 feet on Chesnut, by 85 feet on Third streets, the lands lay principally in such parts of the city, where property is not likely to become very valuable. More than one-third is entirely beyond the city limits. Four-fifths of the Broadway property is taken up by Broadway, and Survey No. 316, extending from corner of Chesnut and Fourth streets, south to Elm street, is nearly all taken up by Fourth street.

The value of the whole amount of property, acquired through Congressional bounty, in the possession of the Board, and under lease, is probably about $400,000, and yields an annual rent of about $14,-500."

The entire quantity of land held by the Board for school purposes (except lots on which schools are situated) is 170 56 acres, which is estimated to be worth $1,096,815.

Besides the income from the lands, the public schools receive support from the following sources:

"In 1836, a vote was taken to obtain the consent of the citizens of St. Louis to the sale of the Commons; at which election, the citizens also voted to appropriate ten per cent. of the net proceeds of said sale to the establishment and support of Public Schools. The Board has received from sale of Commons, up to the first of July last, a fraction less than $15,000. Last year, the income to the schools, according to the city officers reports, was only some $300, and is not yet received. In the year 1849, a pole was opened in pursuance to an act of the

* The New Madrid certificates, are certificates issued by a special act of Congress, for the relief of the sufferers by the earthquakes of 1811, for lands destroyed by said earthquakes, or submerged by it, in what is now known as the Big Earthquake Swamp, in Southeast Missouri. Under these certificates, any public lands, subject to private entry, could be entered, and patents obtained therefor. But as this law of Congress was passed subsequent to the act of 1812, donating the vacant lands within the out-boundaries of the several towns and villages of Louisiana Territory, of course these certificates could not be located upon these lands, because they were no longer Public lands, subject to private entry. Yet, nearly all the school lands in St. Louis were covered by them, and a large portion is still held adversely to the schools under them.

Legislature, to test the sense of the people, whether a tax of one-tenth of one per centum shall be assessed and collected for educational purposes, which was carried by a large majority. This tax, in 1850, being the first year, amounted to $18,432. This year it will probably be $28,000. At the last session of the Legislature of Missouri, a new school act was passed, setting apart one-fourth of the entire State revenue for educational purposes, and also giving the children of the city of St. Louis their *pro rata* of it, and all the other State school moneys. Under this act, the Board, during the last fiscal year, being the first distribution under the act, received $27,456,51. Such is the nature of the provisions for the establishment and support of Public Schools in this city. The history of the incorporations made to administer these legislative provisions deserve briefly to be traced."

Schools and School Houses.

A Board of Trustees for superintending Schools in the town of St. Louis, was incorporated by an act of the Legislature, passed 30th January, 1817. Gen. William Clark, William C. Carr, Col. Thomas H. Benton, Bernard Pratte, Auguste Chouteau, Alexander McNair, and John P. Cabanne, were named in the act as first Board of Trustees. The Board was organized on the 4th day of April, 1817. Gen. Clark was elected Chairman, and Col. Benton was appointed Secretary, which office he held, as we learn from the report before us, until the 15th of February, 1827. It does not appear that any schools were established by the first Board, and the last record of their meeting bears date the 5th of April, 1828.

"Present Board. The act of incorporation of the present Board, was passed on the 13th day of February, 1833; and on the first Monday of April, in that year, an election was held for Directors, which resulted in the choice of Hon. Edward Bates and John P. Reily for the South Ward, Josiah Spalding and Judge Mary P. Leduc of the Middle Ward, and Dr. Cornelius Campbell and Hugh O'Neil, Sen'r. of the North Ward, who met on the 18th of said month, and organized, by electing Judge Mary P. Leduc, as President."

In 1837 the Board commenced the building of two school houses, each two stories high, one located at the corner of Spruce and Fourth street, and the other at the corner of Broadway and Cherry street. The building of these houses was undertaken for the sum of $3,170 each. The opening of these schools was fixed by the Board to take place on the first day of April, 1838. David Armstrong and Miss Mary H. Salisbury were elected teachers for school No. 1 at the corner of Spruce and Fourth streets, and Edward Leavy and Miss Sarah Hardy were elected teachers of school No. 2 on Broadway. The salaries were fixed at nine hundred dollars per annum for the male teachers, and five hundred dollars per an-

num for the female, payable quarterly. School house No. 3, on 6th street, now called the Benton, was built in 1841, at a cost of about $10,625, and the school opened on the first Monday in January, 1842. Admission fee $2.50 per quarter, and salary of male principal $900, female $500. The public schools now number twenty-seven, employ seventy-two teachers, and when full, will accommodate upwards of four thousand pupils, the daily average during the last year being three thousand seven hundred and ninety-one.

No entrance fee is now charged by the Board; the public schools of St. Louis are open and free to all classes alike. The following judicious remarks on the efficiency of the public school system are copied from the able and valuable report of the Superintendent.

"Efficiency and cost of instruction. That the system of public instruction possesses immeasurable advantages over the private system is too palpable to be questioned. The private teacher either more or less has to sacrifice his independence and a sence of duty, to accommodate his requirements to a conformity with the whims and caprices of the parent and child, or of both. To exact as little study and mental labor as possible from the pupil, is generally acceptable to pupils, and makes the teacher popular with them; and popularity with the pupils is synonymous with popularity with the parent. But thorough scholarship, efficient and varied mental discipline, clear conception of principles, and the power of elucidating them and legitimating the conclusions to which they lead, are incompatible with the tenderness with which a private tutor has to handle his pupils so as to give them no offense. The public teacher has none of these influences to make him swerve from the line of duty for the sake of policy. He, to be sure, and properly too, is subject to public opinion; but this public opinion is in favor of a fearless performance of duty, and a faithful discharge of the trust committed to his hands. It is only by a wanton and systematic outrage of the principles of humanity, that a teacher, like every one else that does so, becomes odious to the community. It is never a matter of any concern with him whether he pleases or displeases this or that child, or parent; but his only concern is, to know and do his duty, and faithfully to administer the trust reposed in his hands by the Directory. He has but one rule to govern his conduct, and that is the line of duty, which he is bound to pursue, letting consequences to take care of themselves. The Board prescribes conditions upon which any and all can enjoy the benefits of public instruction: those who will not comply with these conditions, must forego the privileges; and for no man, it matters not what his station, or how great his wealth, will these conditions be changed. In fine, the public teacher has the parent in his power; whereas, under the private system the parent has teacher in his power. From this arises the superiority in efficiency of the public system of instruction, over the private.

The public system has not only the advantage in general efficiency, but also in economy. In our Primary Schools, the average annual cost

of educating one pupil is about five dollars; in private schools it averages thirty-six dollars; in our Grammar Schools the average annual cost is about $12.75; in private schools for the same studies the average is $60; in our High Schools the average annual cost of educating one pupil is about $30; in private schools the same studies average $90. The average annual cost per pupil in all the Public Schools for the year just closed was $10.32; in private schools the average is $50, per head.

This shows a difference of five to one in favor of the Public School system. Estimating the number of persons of educateable age in the city of St. Louis at 23,000; these at $50 per head, if educated in private schools, would cost $1,150,000 per annum; but if educated in Public Schools the same would only cost $237,360; showing a saving of $912,640 annually. There are many other points presenting social, moral and political aspects, in which the public and private systems of educating may be contrasted, in which the advantages are just as overwhelmingly in favor of the Public system; but space forbids enlargement upon them. I therefore merely indicate them, and commend them to the politician, philanthropist and christian, as worthy of their most serious consideration and prompt action."

"Comparative cost with other cities. There are not sufficient data at hand for me to institute a strict comparison between the cost of education in St. Louis and that of other cities. Last year, the total amount expended for support of schools in St. Louis was $38,800.70, including salary of Counsellor, special taxes. &c., incidental expenses to the Board as landed proprietor. I estimate these incidental expenditures to amount to at least $2,000 per annum. If these be deducted, the amount of expenditure of Schools will only be $36,800, and the number of daily attendance being 3,791 pupils, the cost of education per head, was only about $9.75. There is accommodation for about 4,100 pupils in the schools, and if all the schools had been full the expense would not have been greater. This then would show, that children can be educated in the Public Sohools for about $9 per head, per annum. It must also be borne in mind that for officers' salaries and various other expenditures, the amount paid for 4,000 pupils is as great as it would be for 10,000 or 15,000. The present cost of education in St Louis may be then assumed to be as high, as it ever will be; even under a system of more liberal salaries, which the Board will be compelled to adopt, *nolens volens*. I take the following statement of comparative cost of tuition, from the last annual report of the Board of Education of the city of New York, presuming them to be correct. New York annual cost per pupil $6.86: Philadelphia $8.11: Boston $14.35: Baltimore $12.30: average in twenty-five of the largest cities in the Union $9.04. I have not had time to verify these amounts, where I have the data, neither do I know whether the New York estimate includes the expenses of the Free Academy, nor that of Philadelphia that of its High Schools, nor how these estimates are made up; but it will be seen, that the cost of tuition in St. Louis compares favorably with the cost elsewhere, when it is considered that living is higher here than in the eastern cities. I again call attention to the fact, that the expense of Public tuition is greater per head in proportion as the number is small. In the year 1851, when the

number of pupils in the schools was about 2,100, when there was no High School, when the Superintendent's salary was only $1,000 per annum, when the salaries of teachers were on an average fifteen per cent. lower than now, I presented in the annual fiscal report a cost of tuition per pupil, and the expense as then shown was $10.49 per head, per annum. Now the Superintendent's salary has been increased fifty per cent.; some of the teacher's salaries forty per cent.; and a High School established, yet the annual expense of tuition has actually receded. If things had remained the same, the actual recession of tuition would have been at least twenty per cent. From these facts, I conclude that when our school system is fully organized and in operation, with High Schools for the accommodation of all who wish to take the higher course of studies, and with liberal salaries, so as to secure the best educational talent in the country, the cost of tuition, on an average, of those attending school, will not exceed $10 per head, per annum."

FINANCES.—RECEIPTS for the fiscal year ending July 1st, 1854, were as follows:

Rents from leased lands	$13,253 53
State School moneys	27,456 51
County School moneys	3,587 28
Quit Claims, lands sold and compromised	14,687 19
City School Tax	27,758 85
Interest	216 19
Bills Receivable	29 00
Total	$87,088 55

The expenditures during same period were $64,653.95, leaving $22,434.60 balance in the Treasury, besides $2,000 city bonds.

HIGH SCHOOL.

We agree with the General Superintendent in the opinion that the Board of Directors have acted wisely in establishing High Schools: without these, their system would have been incomplete, and could never have obtained that degree of spmpathy and support which are necessary to develop the efficiency and usefulness of all literary Institutions.

In connection with this subject, the General Superintendent says:

"There is nothing that the Board has done for many years that has had a tendency to popularize the Public Schools so much, and make them the schools of the city as the organization of this High School, and the erection of the splendid High School edifice now in progress. All classes and conditions of society, from the widow, who earns a livelihood for herself and children by her daily toil, to the millionare, who counts his income by thousands, are now pressing for admission into the Public Schools; and the regret is, that the applicants can not

all be accommodated. The rich are applying from a conviction that for thoroughness there are no institutions in the country that surpass the Public Schools; and for extent, few colleges afford such a range of science and such opportunities of scholarship as the High School will when fully organized. The poor and those of small income see in these popular institutions the means of putting their sons and daughters upon an equality with the rich, as far as intellectual cultivation and literary acquirements are concerned. A great point has therefore been gained, that of uniting all classes and conditions in the support of the Public School system: First, by establishing that high character for efficiency and thoroughness for our Primary and Grammar Schools, which they now occupy; and second. in organizing a High School, and making such complete arrangements for its successful conduct as to give assurance that all scientific and literary attainments desirable will be furnished free of expense to all who wish to avail themselves of them."

In the winter of 1852-3 the Board organized a High School, which it temporarily located in the Benton School, on Sixth between St. Charles and Locust streets. The school opened for the reception of pupils on the first Monday of February, 1853, and after an examination, some seventy odd pupils were found qualified and admitted. The school was placed under the charge of Jeremiah D. Low, A. M., long connected with the St. Louis Public Schools, and favorably known to the public as a successful and popular teacher. The school still remains in his charge, and is in a highly prosperous and flourishing condition, numbering one hundred and ten pupils.

The lot on which the splendid High School edifice is now being built, was purchased in January, 1853: it contains 150 feet front on Olive street, by a depth of 106½ feet, and was bought from James H. Lucas at $100 per front foot, upon time. The notes added to the principal make the lot cost $17,900. The contract for erecting the building was made last spring with Sage and Webster; it will cost about $45,000; and will be completed about the first of July, 1855.

Description of House.—The building in its extreme length is one hundred and six feet four inches; and extreme width eighty-four feet, that is, including towers and transepts. The body of the building is eighty-four feet, by sixty-seven; main height seventy-one feet; and to the apex of the roof eighty-six feet. Front square tower, used respectively in each story for reception room, library, museum, and astronomical observatory, one hundred and six feet high. Octagonal tower flanking each corner, one hundred and two feet high; finished with ogee pinnacled roofs, ornamental crotchets on each angle, terminated with large foliated finials. The wings or transepts on the sides, are thirteen by seventeen feet, with large gothic windows, seven by thirty-four feet, filled with tracery and with ogee crocheted hood moulding, and finial. A similar window is in the large square front tower. All the windows have large cast iron hood mouldings to be painted in imitation of stone; buttress caps, string courses, and wall copings, also, of cast iron, and finished in the same manner; roof covered with slate, with copper gutters. Transverse and longitudinal halls, divide the first and second stories into four rooms each, and

each room capable of accommodating seventy scholars. The desks are supported in an entire new style, by means of a cast iron peristyle, with large pedestal and four claws for screws; peristyle placed in the centre of the desk, adding much to the comfort, cleanliness, quiet, and free ventilation of the room. The desks are made of cherry and varnished. The chairs, which are on the arm chair fashion, are supported similarly to desks, move on a pivot so as to turn one-quarter way round, and the iron work of both desk and chairs are neatly bronzed. Wardrobe rooms in the towers, are attached to each school room, with hydrant, and iron sinks for washing and drinking purposes. The philosophical and chemical lecture room in the basement, is sixty-one feet by thirty-one feet, with apparatus rooms in towers, with sinks and water; also, two fire places at each end of the room for experiments in chemistry and philosophy. The other basement is used by three furnaces for heating the building. The upper, or great hall in the third story, being the full size of the building, is large and commodious, capable of accommodating six hundred persons. A large platform, twenty feet deep, and the width of the building is at the south end of the hall, to be used by scholars on examination day, and for recitation, declamation, and reading their exercises; also, for a stand for lecturers. There is a retiring room behind the platform in the front tower, for scholars to prepare themselves for performing respective parts in dialogue, &c. From this retiring room a flight of stairs ascends to the astronomical observatory. The rooms in the octagonal towers of this story are intended for committee rooms for directory, or for private conference of teachers and parents, or friends, at general exercise, or on examination day. There are two museum rooms in the second story of the transepts, one for males and the other for females. The entrance or reception room, for strangers and parents, is in the first story of the observatory, or front square tower on Olive street. Over the reception room is the library room. Perfect and thorough ventilation is aimed at, and the latest improvements to attain it adopted. The stairs are broad and direct, giving free and easy access to, and from the building at all times, and securing against all accidents in case of alarm of fire, &c. All the finishing of the school rooms and halls, are to be grained oak and varnished. Wardrobe rooms are to be supplied with double clothes' hooks; halls with umbrella racks, troughs, and places for overshoes, all made of cherry and varnished.

ARTICLE VI.

Lead in Southwest Missouri.—Moseley's Mines.

We are indebted to G. W. Moseley, Esq., of Neosho, Mo., for the following interesting account of the Lead mines, mining and lead trade in Southwest Missouri. We value this document the more highly because it is evident from its tone that it is not written for effect. From our knowledge of the author we feel assured that he is no speculator in mineral lands and fancy mining stocks; and it is quite refreshing to contrast the primitive, honest method by which mines have been opened and metal smelted in Southwest Missouri, with the mining stock speculations which have been projected in other parts of the country for some years past. We trust the time is not far distant when the principal cause of discouragement to mining in that region will be removed. The construction of the Southwestern Railroad will be the means of removing that cause and of developing the most extensive and perhaps the richest lead region of the United States.—*Ed.*

Neosho, Newton co., Mo., Nov. 25, 1854.

MESSRS. TARVER & COBB.

Gentlemen: — I have just been making out some accounts for Professor Swallow in regard to the minerals and mining operations in Southwest Missouri. I have thought that you would like to have a correct account of the amount of mineral raised and smelted in this new mineral region of Missouri. The following statements may be relied on. I have put myself to a good deal of trouble to collect the facts, and if you deem them of sufficient importance to give them a place in your valuable Journal, you will oblige me, and save me a great deal of trouble in answering letters of enquiry from various places.

The first smelting of Galena–Lead ore—in Southwest Missouri was commenced in the year 1850 by Mr. A. Spurgeon, on section 32, Township 26, Range 32, in Newton County. Mr. Spurgeon raised from this section 226,000 pounds ore, which he smelted in log furnaces in the years 1850 and 1851. The log furnaces used in this country were generally constructed on the side of a hill. They were made 8 feet wide, 10 feet long, 6 by 8 feet in the clear, and the walls about 5 feet high. In the front of the furnace was an eye, say 2 feet square, through which the fire was stirred, and out of which the lead run when melted. The bottom of the furnace was laid with flat stone, the wood was prepared by cutting large logs to drop in the furnace, together with some dry wood,

the mineral being mixed with the wood, after being washed in a common trough made from a hollow tree. The furnace being charged in this way, the fire is kindled, and the melted lead caught in a common dutch over.

This mode of smelting produced some 80,000 pounds of lead, sold for $4,000, and yielded about 35 per cent. This lead was generally peddled out in the small towns and in the Indian country on our western border.

In the year 1850, Moseley & Co., of Neosho, built a furnace known to smelters as the Drummon furnace, situated near to Moseley's mines. On this furnace G. W. Moseley & Co. smelted from their own mines on section 35, township 26, range 32, in Newton county, 250,875 pounds of lead ore, and 25,000 pounds purchased at other mines. The mineral smelted in this furnace yielded a fair per cent; (the lead being shipped to New York and Boston.) In the fall of 1851, G. W. Moseley & Co. commenced building a blast furnace, with two stacks, propelled by water-power, and on the 9th day of February, 1852, they completed this furnace, at a cost of $3,000. They smelted from the Moseley's mines 142,500 pounds of ore; from Center creek, in Jasper county, 99,074, and from Turkey creek, in Jasper co., 95,073.

In July, 1853, this blast furnace went in to the hands of the Moseley Lead Manufacturing Company. They smelted from the Moseley mines 110,500, and from Oliver's Prairie, in Newton co., and Center and Turkey creeks, in Jasper co., 93,000 lbs. of ore.

In Jasper county, Mo., Mr. Harklerodes erected a blast furnace, single stack, in the early part of the year 1853; and from the best information that I have, has smelted since he commenced from Center and Turkey creeks, in Jasper county and Olivar's Prairie, in Newton county, some 300,000 pounds of ore. The amount of mineral that is at present on hand, and which will be ready for delivery by the 20th of December next, is estimated at 200,000 pounds.

Since the commencement of the lead business, in 1850, up to the 20th December, 1854, we show of the ore raised 1,551,022 pounds. Until this last spring the lead has been transported say from Moseley's furnace to Moseley's Landing, on Grand river, in the Seneca nation, by wagons, at 25 cents per 100 pounds, and thence by flatboats to Fort Smith, at a cost of 40 cents per 100 pounds, and thence to New Orleans by steamboat. G. W. Moseley & Co. had their lead always insured on flats, with privilege of reshipping, at a cost of 2½ per cent. on its value at New Orleans. The usual price of freight from Fort Smith to New Orleans is fifty cents per 100 pounds. G. W. Moseley built their own flatboats, and hawled the lumber fifty miles. The three years that they shipped their lead down Grand river, their bills of lading date in May and July in each year, they have shipped from 800 to 1,000 pigs of 70 pounds each, upon a single boat. It is said that boats could

go with much larger loads; one season they shipped on 30 feet water. There are several objections to shipping by Grand river: first, its location in the Indian country, secondly, the great difficulty of getting lumber, and thirdly, the river can only be relied upon in May and July of each year.

If persons engaged in the lead business had a sufficiency of capital to purchase mineral and hold on to the lead until these periods arrive, say May and July in each year, lead could be sent much cheaper than by Boonville to St. Louis. For instance, the same boat that carried 1,000 pigs to Fort Smith, could be made with very little additional expense to carry 2,000 pigs with equal safety. Since the Seneca country has been treated for by our government, mills will be erected to saw lumber: all these things will still lessen the expense; and I think without a doubt that lead can be delivered at New Orleans from this country for 80 or 85 cents per 100 pounds by this route. The Moseley Lead Manufacturing Company sent their lead to St. Louis, last spring, by Boonville; transporting it to Boonville on wagons, at $1 per 100 pounds, and thence by steamboats, at a cost including charges of storage, receiving, forwarding, insurance, freight, &c., of 25 cents per 100 pounds.

It is a safe calculation to say that 1,000 pounds of good lead ore, smelted in the blast furnace, will yield 650 lbs. of lead; this at the present prices in St. Louis, 6 cents, will be $39.00. Cost of transportation to St. Louis, at 1¼ cents per pound, will be $8.12½. The 1000 pounds of ore in the Galena mines, in Illinois, will yield the same 650 lbs., and be worth in St. Louis $39.00. I suppose that lead can be shipped from Galena at 30 cents per 100 pounds; this would be $1.95 for each 1000 pounds of the ore: this will make a difference of $6.17½ in favor of the Galena smelters. For example, if in Galena mineral is worth $30.00 per thousand pounds, it is only worth here in Southwest Missouri $23.82½. Thus it will be perceived that, should lead again go down to a price that would depress the value of mineral at the Illinois mines to $15.00 per thousand pounds, it would be worth only $8.82½ per thousand in Southwest Missouri, which would be discouraging to the miners of this region. Yet so long as we have to hawl in common wagons to Boonville, this state of things will exist. Furthermore it is only a limited amount of lead that can be sent to St. Louis, even at the rate of one dollar and twenty-five cents per hundred pounds. For instance, I say to a wagoner, sir, I have a load of lead to send to Boonville, and I would be glad you would start in three days. His reply is, have you a back load? I answer, no. Then, he says, I cannot hawl it unless I can get a load of goods to hawl back for some of the merchants; if you are very anxious for your load to go, and I cannot get a load to hawl back, I will take your load, if you will pay me $2 per 100 pounds, the Boonville prices to Neosho at this season of the year; but if

you will wait until my team can live on grass, I can afford to hawl for $1.50 per hundred. These are prices which the owner cannot afford to pay, and of course the lead remains on hand.

G. W. Moseley & Co. have sold their lead in Boston and New-York, where they obtained the same prices paid at the time for Illinois lead. Our best mineral, when analyzed, is found to contain 85 per cent.; no other district in the United States, I believe, produces richer ore. I should think all assayers would be satisfied of this, were it not for what I once saw not a hundred miles from our city. A gentleman who had been traveling through our section of country, and also through the Washington and Madison county mines, and had lived for many years near the latter, was exhibiting to the President of a corporation the different specimens of ore, and among them one from Moseley's mines, of this county. While the President was carefully examining each specimen, the gentlemen called his attention to one from his own favorite home, and said, this is the best specimen I have seen; this will yield 90 per cent. of pure lead. I sat in silence, and thought to myself that the President would correct the gentleman, but he did not.

Our mineral region embraces the counties of Jasper, Lawrence, a portion of Grundy, Barry, McDonald and Newton, in Missouri, the country claimed by the Quapaw, Seneca and Shawnee Indians, the northeastern portion of the Cherokee country, and through Northwest Arkansas. There can not be a doubt but this country is the most extensive mineral region in the United States.

I have endeavored to give you a fair and honest expose of this country, representing it as it is, with its advantages and disadvantages. Give this country a railroad, and its mines when fully developed will send more lead to St. Louis, than Iowa, Wisconsin and Illinois send to that and every other market.

Yours, respectfully, G. W. MOSELEY.

ARTICLE VII.

Ancient Fauna of Nebraska.

FROM THE EIGTHTH ANNUAL REPORT OF THE BOARD OF REGENTS OF THE SMITHSONIAN INSTITUTION.

1. The first memoir published during the past year is one by Dr. Joseph Leidy, Professor of Anatomy in the University of Pennsylvania, entitled, "The Ancient Fauna of Nebraska."

A consideradle portion of the country between the Mississippi and the Rocky mountains consists of the more recent geological deposits, and particularly on the Upper Missouri there exists a tract of country

known by the name of the Mauvaises Terres, or the Bad Lands; this at one time was probably the bottom of an immense lake, in which perished thousands of animals having no representatives at this time on the surface of the earth. It appears that the waters of this lake were removed by some convulsion of nature, that the sediment at its bottom became indurated, and that afterwards the whole country was traversed by an immense wave of water, which carried away the softer parts of the strata, and left standing the harder parts in a series of irregular prismatic and columnar masses frequently capped with irregular pyramids, and extending upwards to a height of from one to two hundred feet. "Viewed in the distance, these rocky piles in their endless succession assume the appearance of massive architectural structures, with all the accessories of buttresses, turrets, and tapering spires." The portion of the surface thus excavated forms a valley of ninety miles in length and thirty in breadth, which in its most depressed portion is about three hundred feet below the surface of the surrounding country. So thickly are the natural towers studded over the surface of this extraordinary region, that the traveller threads his way through deep confined passages, which resemble the narrow irregular streets and lanes of some of the old towns of the continent of Europe. At the foot of these columns, the remains of the ancient animals, which lived and breathed long before the advent of man upon the face of the earth, are found in such abundance as to form of this tract an extensive cemetery of vertebrated animals, rivalling, in the variety of its extinct species, the celebrated beds of the Paris basin.

This region having been brought to notice by a few fossil remains procured through the agents of the American Fur Company, an appropriation of about $200 for its exploration was made by the Smithsonian Institution to Mr. Thaddeus Culbertson, who was about to visit, on account of his health, the sources of the Missouri. The specimens of fossil remains which were thus procured, together with a collection subsequently presented to the Institution by Capt. Stewart Van Vliet, of the U. S. army, and several specimens kindly lent by Dr. Prout, of Missouri, were referred to Dr. Leidy for examination. In addition to these he had the use of a collection lent by Prof. O'Loghland, of Missouri, specimens belonging to the Academy of Natural Sciences, Philadelphia, and a collection made by Dr. Evans, at the instignation of Dr. D. Dale Owen, the whole embracing all the specimens which have yet been brought to the east from the Bad Lands. The bones are completely petrified, and their cavities filled with silicious matter. They are preserved in various degrees of integrity, some being beautifully perfect and others broken and imperfect, the latter having been evidently subjected to violence while imbedded in a soft mud. The animals belong to the classes mammalia and chelonia, or turtles. With a single exception, all the species of mammalia belong to the great order of ungulata or hoofed animals, of which there are seven species of four genera, which belong to the ruminantia, or cud-chewing animals; two species of one genus belonging to the paradigitata ordinaria, or even-toed animals; one species of the solipedia, or solid-hoofed animals; and four species of three genera belonging to the imparidigitata ordinaria, or uneven-toed animals.

The first specimen described belonged to a peculiar genus of ruminants which, among recent animals, is more nearly allied to the musk, and was probably hornless. The next is of a remarkable genus of ungulata representing a type which occupies a position in the wide physiological interval existing between recent ruminants and the anomalous fossil animal called the anoplotherium. Another genus is called oreodon, and constitutes one of the links necessary to fill up the very wide gap between existing ruminants and an exceedingly aberrant form of the same family now extinct. Another organic relic is that of an animal which combined the ruminant and carnivorous characteristics, of which there are several species. There are also two remarkable species of rhinoceros, differing from any remains of this animal found in other parts of the globe. The existing species of the rhinoceros are met with in Africa, Asia, and the islands of Java and Sumatra. Remains of extinct species have been found in Great Britain, the continent of Europe, Siberia, and the Himalays ; but no trace of this genus had previously been discovered in America. Another fossil remain belongs to the feline family, about a fifth smaller than the American panther, and is probably the most ancient known genus of this animal. Hundreds of fossil turtles are found in the "Bad Lands;" they belong to the genus testudo, of which five species are described in this paper.

The memoir occupies one hundred and twenty-six pages, and is illustrated by twenty-four plates, one of which is a folio. It has already been printed and copies distributed among working geologists. No copy-right is secured on the publications of the Institution ; and it may be mentioned here, as an illustration of the manner in which the knowledge contained in the Smithsonian memoirs reaches the public generally in a popular form, that one of the figures of this paper has already been copied, and some of its materials given in a recent work on geology.

N. CAROLINA STATE DEBT AND RAILROAD SYSTEM.

The debt of the State of North Carolina amounts to $8,800,000 ; the revenue from all sources is estimated at $200,000. As this sum is not sufficient to defray the State expenses and discharge the annual interest, a scheme will be proposed to the next Legislature to increase the taxes. The late loan of $260,000 was taken at Raleigh at 100½. The State is pursuing its system of internal improvements, and several of the railroads in which it is interested have commenced paying dividends. Wilmington and Raleigh railroad, after sixteen years' struggle has been able to clear a semi-annual dividend of four per cent.; the Raleigh and Gaston railroad has just declared a dividend of six per cent. for the last year; and the recently completed Wilmington and Manchester railrord, in its first year, gives evidence of being good stock.—*Balt. Am.*

STATISTICS OF THE UNITED STATES.

Report of the Secretary of the Treasury on the State of the Finances.*

TREASURY DEPARTMENT,
December 4, 1854.

SIR: In obedience to the "act supplementary to the act entitled 'an act to establish the Treasury Department,'" approved May 10, 1800, the following report is submitted:

The balance in the treasury on the 1st of July, 1853, was	$21,942,892 56
And the actual receipts into the treasury for the first quarter:	
From customs	$19,718,822 00
From lands	1,489,562 05
Miscellaneous	147,994 87
	21,356,378 92
And the estimated receipts for the other three quarters were:	
From customs	37,000,000 00
From lands	3,000,000 00
Miscellaneous	300,000 00
Making the actual receipts for the first quarter, and the estimated receipts for the other three quarters	61,656,378 92
Add balance in the treasury	21,942,892 56
Total for service of the year	83,599,271 48

The actual expenditures of the first quarter of the fiscal year 1853 were $15,081,383 70, and the estimated expenditures for the remaining three quarters were $57,251,283 16, making for the actual expenditures of the first quarter, and the estimated expenditures for the other three quarters, $72,332,666 86; which would have left an estimated balance in the treasury on the 1st of July, 1854, of $11,266,604 62.

The actual receipts into the treasury for the fiscal year ending 30th of June, 1854, were as follow:

1st quarter—from customs		$19,718,822 00
	from lands	1,489,562 05
	miscellaneous	147,994 87
		21,356,378 92
2d quarter—from customs		$13,587,821 27
	from lands	2,223,076 39
	miscellaneous	101,963 64
		15,912,861 30

* We publish the following Report of the Secretary of the Treasury on the state of the finances chiefly on account of the statistics which it contains: we make no comments. For having, in the 11th volume of this Journal, reviewed at some length the doctrines and policy set forth in his report to the first session of the present Congress, we could only reiterate in substance what we wrote and published on that occasion.

3d quarter—from customs		$16,896,724 83
from lands		2,012,908 36
miscellaneous		486,091 93
		19,395,725 12
4th quarter—from customs		$14,020,822 17
from lands		2,745,251 59
miscellaneous		118,666 10
		16,884,739 86
Making		$73,549,705 20
Balance in the treasury 1st of July, 1853		21,942,892 56
Total sum for the service of the fiscal year ending June 30, 1854		95,492,597 76
The receipts from customs were		$64,224,190 27
lands		8,470,798 39
miscellaneous		854,716 54
Balance in treasury		21,942,892 56
		95,492,597 76
The actual expenditures for each quarter of said year were—		
For 1st quarter	$15,081,383 70	
2d quarter	22,301,896 24	
3d quarter	12,448,947 42	
4th quarter	25,522,402 90	
		75,354,630 26
Leaving a balance in the treasury on July 1, 1854, of		20,137,967 50
The usual and ordinary expenditures were as follow:		
Civil list		$4,649,384 98
Foreign intercourse		7,726,677 13
Miscellaneous		13,531,310 33
Interior department		2,609,054 79
War department		11,733,629 48
Navy department		10,768,192 89
Redemption of public debt, interest and premium		24,336,380 66
Total expenditure		75,354,630 26

Balance in the treasury on July 1, 1854, $20,137,967 50, as appears, in detail per Statement 1.

The estimated receipts for the fiscal year, ending June 30, 1855, were as follow:

From customs		$51,000,000 00
From lands		3,500,000 00
Miscellaneous		500,000 00
		55,000,000 00
Add estimated balance in the treasury July 1, 1854		11,266,604 62
Estimated resources for the fiscal year ending June 30, 1855		56,266,604 62
The estimated expenditures for the same year were as follow:		
Balance of former appropriations to be expended during the year	$6,865,126 44	
Permanent and indefinite appropriations to be expended during the year	8,285,716 14	
Specific appropriations asked for the service of the year	35,909,434 54	
Making an aggregate of		51,060,277 12
Leaving in the treasury, on July 1, 1855, a balance of		15,206,327 50

The receipts of the 1st quarter of the fiscal year, ending September 30, 1854, have been as follow:

From customs	$18,639,798 45
From lands	2,731,654 12
Miscellaneous	149,850 28
Total	21,521,302 85

The expenditures for the same 1st quarter have been as follow:

Civil, miscellaneous, and foreign intercourse	$6,241,749 31
Interior Department	2,175,737 13
War Department	3,367,039 92
Navy Department	2,508,791 09
Redemption of public debt, interest and premium	1,876,013 17
Total expenditures	16,169,330 62

Receipts from all sources for the remainnig three quarters of the year are estimated at 42,500,000 00

The receipts for the first quarter, the estimated receipts for the remaining three quarters, and the balance in the treasury on the first day of July, 1854, make a total sum of $84,107,967 50 for the service of the fiscal year ending June 30, 1855.

The estimated expenditures for the remaining three quarters of the year are as follow:

Civil List, foreign intercourse, and miscellaneous	15,066,931 13
Deficiency in the Post Office Department	2,719,464 00
Interior Department	3,133,655 25
War Department	13,628,350 90
Navy Department	11,258,095 71
Interest on the public debt	2,370 093 60
Making	48,176,590 59
Total estimated expenditures for the year 1855	$64,345,921 21

The expenditures of the first quarter, and the estimated expenditures for the remaining three quarters, are $64,345,921 21, leaving an estimated balance in the treasury, on the 1st day of July, 1855, of $19,762,046 29.

There is always, at the close of the fiscal year, a balance thus estimated, not expended, of at least $12,000,000. That $12,000,000 may be applied to the purchase of the public debt during the remaining three quarters, without disturbing the estimated balance in the treasury.

The amount of the public debt, outstanding on the 1st day of July, 1853, was	$67,340,628 78
And on the 1st day of July, 1854	47,180,506 05
Being a reduction of	20,160,122 73

The estimated receipts for the fiscal year ending June 30, 1856, are as follow:

From customs	$56,000,000 00
From lands	6,000,000 00
Miscellaneous	500,000 00
	62,500,000 00
Add estimated balance in the treasury July 1, 1855	19,762,046 29
Making the estimated sum of	82,262,046 29

for the service of the fiscal year 1856.

Estimated expenditures for the fiscal year 1856:

Balance of former appropriations, to be expended this year	$11,212,905 20
Permanent and indefinite appropriations, to be expended this year	7,934,411 70
Appropriations asked for, and to be expended this year	41,722,516 47
	60,869,833 37

Upon this estimate of the receipts and expenditures of the fiscal year 1856 there will be a balance in the treasury, on the 1st of July, 1856, of $21,392,212 92, without expending anything in the redemption of the public debt; but if $12,000,000 shall be applied to the redemption of the public debt, which may be done, there will remain an estimated balance in the treasury of $9,392,212 92.

It appears the receipts from customs, for the second, third, and fourth quarters of the fiscal year 1854, were not diminished from the pressure in the money market and other causes, as expected in my former report. They were kept up from importations, growing out of large exports of provisions, caused by the scarcity in England and France, and the expected demands of the European war, and by the shipments to this country of foreign manufacturers, who, owing to the want of a remunerating market in those countries, sought the benefit of ours. They were also kept up by a greater uniformity and better valuation of foreign goods, and a diminution in smuggling, caused by increased vigilance on the part of the revenue officers. The foreign and internal immigration to the new States and Territories, combined with speculative investments in the public lands, greatly increased the receipts from that source; so that, instead of a reduced revenue, as anticipated, the receipts have been greater than in any previous year.

It also appears from the statement of the receipts of the first quarter of the fiscal year 1854, that the receipts, both from customs and lands, have been greater for the quarter than a fair proportion of the estimated receipts for the year. This has grown out of the same causes that kept up the receipts from customs and lands, for the last three quarters of the fiscal year 1854, aided as to lands, to some extent, by the effect of the act graduating the price, which operated in favor of the receipts, for the latter half of the quarter.

The receipts from customs for the remaining three quarters of the year cannot be in proportion to those of the first quarter, owing to the reciprocity treaty, introducing free trade with the British colonies, and the short crops in almost all portions of the country, which must materially affect the exportation of provisions, and the return importations, and diminish the ability to purchase and pay for foreign goods. The effect of a scarcity of provisions, with consequent high prices, has always been to diminish the consumption of other articles of customary use, and may be expected to operate on the importations for the remaining three quarters of the year, as it certainly will on the consumption. Moreover, the United States have enjoyed a long period of agricultural, manufacturing, and commercial prosperity, under extended bank and other credit facilities, backed by the immense production of gold from the mines of California. This has led to large speculative investments in railroads, lands, lots, houses, ships, stocks, and other enterprises, and to enhanced prices for rents, labor, provisions, and all the necessaries of life. The bank and credit facilities

have been in check for more than a year, with a prospect of a continued check; whilst the large and extended indebtedness of operators has to be met under receding prices, without the stimulating effect of new enterprises. This will also act in restraint of importations and consumption. In the estimated receipts from customs for the three remaining quarters of the current fiscal year, the effects of the reciprocity treaty and reduced importations have been considered; whilst, also, the same causes will operate in the sale of the public lands; but the effect of the act graduating the price has been considered sufficient to keep up the receipts from the latter source to what they were for the fiscal year 1854.

The estimate of receipts for the fiscal year 1856 has been made from an expectation that the same causes which will operate to reduce the importations and consumption of foreign goods for the remaining three quarters of the fiscal year 1855, will be continued through a part of the succeeding year, and sensibly affect the importation and consumption of foreign goods.

The accompanying table, 3, exhibits the particulars of the public debt on the 1st of July, 1853, and the accompanying table, 4, exhibits the particulars of the public debt on the 1st of July, 1854, to which is appended a table exhibiting the interest paid on the public debt during the fiscal year 1854, and the principal, interest, and premium, on the part redeemed within that year. Table 5 exhibits the principal, interest, and premium on the public debt redeemed from the 1st July, 1854, to the 20th of November, 1854. From these tables it appears that the sum of $20,098,422 73 of the public debt was redeemed between the 1st of July, 1853, and the 1st of July, 1854, and that the interest and premium paid on the amount redeemed was $3,345.545 23; and the principal, interest, and premium on that part of the public debt redeemed between the 1st of July, 1854, and the 20th of November, 1854, was $2,604,203 51.

The table, 6, which accompanies this report, exhibits the tonnage engaged in our foreign and coasting trade from the year 1789 to the 30th of June, 1854. It will be seen the increase for the last year has been 395,892 20-95 tons.

The table, 7, which accompanies this report, exhibits our exports and imports for the same time; and the table, 8, which also accompanies this report, exhibits the sums received into the treasury from customs, public lands, miscellaneous sources, including loans and treasury notes, and the tariff, and particular price of the public lands under which the same was received; also the annual expenditures during the same period. From the table of exports and imports it appears the imports are $26,321,317 in excess of the exports, no account being taken of the precious metals brought in by emigrants. The profits on our exports, and the freights earned by our ships in foreign trade, ought to more than cover this excess. The exports include over $38,000,000 of specie and bullion exported; but, whilst specie and bullion are products of labor in our mines, they rank with any other product, and must enter into our foreign trade as articles of commerce, and can have no prejudicial effect upon the great interests of the country. These tables combined, exhibit the growth of our commercial marine, of our exports and imports, and the receipts and

expenditures of our government, and prove that the receipts into the treasury are sufficient to meet all reasonable expenditures, discharge the public debt, and allow a reduction of the rate of taxation, with almost a certainty that our increasing commerce will give an increase of revenue equal to the reasonable demands of the future.

Therefore, I feel it necessary, again, to call the attention of Congress to the propriety of reducing the revenue from customs, so that no more money shall be received into the treasury than is required for an economical administration of the government. The reduction proposed in my former report, as carried out by the bill prepared in this department, and the reduction proposed in the bill, prepared and reported by the Committee of Ways and Means of the House of Representatives, would each have effected the object of bringing the receipts from customs to the proposed revenue standard.

The present tariff has eight schedules, or different rates of duties, as follow: The first of 100 per cent., the second of 40 per cent., the third of 30 per cent., the fourth of 25 per cent., the fifth of 20 per cent., the sixth of 15 per cent., the seventh of 10 per cent., and the eighth of 5 per cent. The bill prepared by the Committee of the House of Representatives has five schedules, as follow: The first of 100 per cent., the second of 20 per cent., the third of 15 per cent., the fourth of 10 per cent., and the fifth of five per cent. And the bill prepared at this department, and which is substantially the one reported by the minority of the Committee of the House of Representatives, has but two rates of duty: The first of 100 per cent., and the second of 25 per cent. There are difficulties in the execution of the present tariff growing out of the required classification under the eight schedules; and these difficulties continue to increase by the acts of the manufacturers in assimilating one class of goods to another, and in ascertaining the material of chief value in the fabrics. The difficulties would be reduced under the bill of the committee, and would entirely disappear under that proposed by the department.

The bill of the committee, with the tables herewith annexed, exhibits the revenue from customs for the fiscal year ending June 30, 1853, and what has been the revenue under the present tariff for the average of six years, including 1853, and what would have been the receipts for the same periods under the bill of the committee, and under the one recommended by this department. These tables only include the enumerated articles in the bill of the committee, leaving the sum of about $2,000,000 of revenue from unenumerated articles; but they are sufficient to explain the character of the present tariff, the one proposed by the committee, and the one by the department.

Herewith is also presented exhibit 10, containing the free list proposed by this department, to which is added the English tariff on the same articles; from which it will be seen that the English tariff makes most of these articles free; and, as far as these articles are used in the arts and manufactures, most of them are free of duty under the laws of other manufacturing nations. Under the English tariff, the raw material used in the arts and manufactures have been made free of duty, whilst our tariff of 1846 imposes on those articles heavy duties; and thus, to the extent of the duty on the raw material, the English manufactnrer has a decided advantage over manufacturers of

the United States in the markets of other nations, whilst the effect of the tariff of 1846 is reduced in our own markets. In the revision of the tariff, for the purpose of reducing the revenue, it was deemed expedient and proper to take away the advantages accruing to the manufactures of other countries, under their free list, by making the same articles free under our laws, except as to the article of wool, and as to that article, on the coarser wools. Under the reciprocity treaty, wool from the British provinces will be admitted free of duty. In 1853, the importations of wool and woolen goods amounted to over $30,000,000, and the wool and the value of the wool in the manufactured article, amounted to at least $10,000,000. This was over and above the amount produced in the country, and afford satisfactory evidence that sufficient wool is not produced in the country for its consumption. The consumption of wool in the United States for the year 1853, is estimated at 200,000,000 pounds, of which 60,000,000 is the production of the country, and 21,000,000 imported as wool, and the balance of 119,000,000 imported in manufactures of wool.

The proposed addition of articles of general consumption to the free list, such as salt, &c., was deemed more questionable, but was made because it seemed to have had the sanction of Congress and the people, as to tea and coffee, and it was thought would leave the operation of the tariff laws more equitable in their bearing upon all sections of the country than a general reduction on all articles. The addition of unadulterated wines was made to promote our commercial intercourse with wine-producing countries.

The present tariff, the bill of the Committee of the House of Representatives, and that of this department, impose the like duty of 100 per cent. on spirits imported. The bill of the committee reduces the schedules of the present tariff from 40, 30, and 25 per cent. to 20 per cent., retaining the 15, 10, and 5 per cent. schedules, with some transposition of articles from one schedule to another; whilst that of the department imposes a duty of 25 per cent. on all articles not made free; most of the articles in the 15, 10, and 5 per cent. schedules of the present tariff having been added to the free list, there being no just reason why the articles not added to the free list should not pay the higher rate of 25 per cent. The table, 11, which accompanies this report, exhibits the amount that would have been collected for the year 1853 under the present tariff, the bill of the committee, and that of the department, and what would have been collected under each schedule of the bill of the committee, and affords evidence that the 5th schedule will not pay the expenses of collection. Indeed, it is believed the advantages of these schedules will be counterbalanced by the increased difficulties and expense of collection. Whether the general rate should be 20 or 25 per cent., is a question of some doubt. It was thought that a reduction to 20 per cent. might have the effect of increasing the revenue by increasing the importations; whilst the duty of 25 per cent. would not probably have that effect. A question of greater difficulty was, whether the rate of 40 per cent. should not be retained on manufactured and adulterated wines, and whether silks and some other sumptuary articles should not be added to that schedule. Upon mature reflection, I am fully satisfied that the schedule of 40 per cent. should have been retained, keeping in it wines not made free, and ad-

ding to it silks of all kinds, laces of all kinds, millinery of all kinds, and other sumptuary articles; and I now recommend that, in revising the tariff, such a schedule, specifying the articles, be added.

The table, 12, which accompanies this report, exhibits the articles manufactured in the United States, which have formed a part of our exports, for the years 1846, 1847, 1848, 1849, 1850, 1851, 1852, 1853, and 1854. It will be seen from this table that there has been a great increase in the annual export of articles manufactured in this country. It may be fairly calculated that the $26,000,000, and upwards, of manufactured articles exported during the fiscal year 1854 will continue gradually to increase, until the manufactures of the United States shall constitute a fair proportion of our foreign exports.

In recognising, as I do, the principle that duties should be levied for revenue, and not for protection, I have considered it no departure from the principle to counteract the legislation of other countries, and make the same articles free under our laws that are free under theirs; knowing, also, that there never has been a tariff law enacted, under the constitution, in which some articles were not allowed to be imported free of duty.

The table, 13, which accompanies this report, exhibits duties to the amount of $1,524,457 40 on the articles made free by the reciprocity treaty with Great Britain during the fiscal year 1854; to which extent the annual revenue from customs will thereby be reduced.

In my former report a repeal of the fishing bounties was recommended, for the reasons there referred to. That recommendation is renewed, and the subject of drawback duties on refined sugar is recommended to the consideration of Congress. The same principle would require like drawbacks on all exported articles on which there is a duty on the raw material used in their manufacture.

The reports of the First, Second, Third, Fourth, Fifth, and Sixth Auditors, and of the First and Second Comptrollers, and the Commissioner of Customs, which accompany this report, numbered from 14 to 22, inclusive, exhibit a fair statement of the operations and condition of their respective offices. They are all in good order, and the current business is promptly, and, it is believed, correctly done; and, besides, considerable progress has been made in closing the large unsettled balances that stood open on the books of the treasury, as stated in my former report. That report stated the outstanding balance on the 1st of April, 1853, at $132,521,704 09

And there had been settled, up to the date of that report	30,500,154 50
Leaving	$102,021,549 59
Since the date of that report, this sum has been reduced by settlements, collections, &c., .	74,438,400 97
Leaving yet unclosed	$27,583,148 62

Under the act of 1853 there has been $16,152,170 of silver coined at the mint in Philadelphia and branch mint at New Orleans, and circulated at Philadelphia, New York, Boston, Detroit, Chicago, Baltimore, Washington, Richmond, Norfolk, Charleston, Savannah, New-

Orleans, St. Louis, Jeffersonville, Cincinnati, San Francisco, and Pittsburg; and furnished to citizens at various other places. This has tended to keep a sound currency for change in circulation, and afforded great convenience to the public; but the circulation of large amounts of small bank notes has contracted the benefits of the silver change in many places, or driven it away, or tied it up in the pockets of the people. The full benefit of silver coinage for change can never be realized whilst small bank notes are encouraged under bank charters, and made current by the patronage of the community.

These tables give some data from which an estimate may be made of the increasing amount of gold and silver coin retained in the country. The table, 34, with the remarks annexed, which accompany this report, exhibits estimates made by Secretaries of the Treasury and others, of the amount of gold and silver coin in the country at different periods, and gives the amount on the 30th of September, 1854, at $241,000,000, which is believed not to be a high estimate. Of this sum there was about $60,000,000 in the banks, and $26,000,000 in the United States treasury; the rest being in circulation amongst the people, or hoarded up.

It appears from the report on the banks from this department, submitted to Congress on the 6th of May, 1854, that in 1850–'51 there were 879 banks in the United States, with a capital of $227,807,533, and in 1853–'54 there were 1208 banks, with a capital of $301,756,071, being an increase of $73.948,538. In 1850–'51 the circulation of the 879 banks was $155,165,251, deposites $128,957,712, due to other banks $46,411,928. and together $330,539.891; and in 1853–'54 the circulation of the 1208 banks was $204,689,207, the deposites $188,188,744, and there was due to other banks $50.322,162, and together $443,200,113, making an increase of $112,660,222, with specie in their vaults in 1850–'51 of $48,671.048, and in 1853–'54 of $59,410,253, being an increase of $10,739,205. These tables exhibit a bank circulation of $204,689,209, against the $241,000,000 of gold and silver in the country. The independent treasury of the United States, receiving and paying for the fiscal year 1854 more than $75,000,000 in the current coin, has kept up the demand for it, and prevented the large bank circulation from obtaining the mastery, and driving the constitutional currency from the country. In our table of exports we find an increase in the export of coin over the previous year, but not exceeding the produce of our mines. This increase may be, in part, accounted for by the large redemption of the public debt held abroad, and the bank circulation, a large part of which was in small notes circulated at a discount in places remote from the issuing bank, and forcing the better currency of gold and silver out of the market.

Arkansas Statistics.

STATEMENT, showing each species of property taxed in the State and the separate value of each, the total value of property taxed and the amount of taxes charged thereon for the years 1847, 1848, 1849, 1850, 1851, 1852, 1853, and 1854. From the county of Green no return has been made for the year 1847, and no return has been made from the counties of Searcy and White for the year 1852, nor has any returns been made from the counties of Fulton, Arkansas, Lawrence, Monroe, and Polk, for the year 1854.

Years.	Number of persons liable to pay a poll tax.	Value of lands and improvements taxed.	No. of town lots taxed.	Number of slaves over 5 and under 60 years of age taxed.	Value of slaves over 5 and under 60 years of age taxed.	No. of saw-mills taxed.	Value of saw-mills taxed.	No. of tan-yards taxed.	Value of tan-yards taxed.	No. of distilleries taxed.	Value of distilleries taxed.	Household furniture over $200 taxed.	Number of pleasure carriages taxed.	Value of pleasure carriages taxed.
1847.....	20,176	$12,502.327 43	7,573	24,986	$9,768,421	112	$72.613	75	$20,664	48	$3,864	$41,273	220	$27,405
1848.....	22,336	13,328,762 82	8,213	27,164	10,682,179	121	83,370	74	21,330	46	4,123	39,035	235	29,575
1849.....	25,085	15,242,652 89	8,903	30,133	11,856,711	131	81.171	92	24,945	51	4,239	42,685	248	32,057
1850.....	27,844	16,207,021 11	11,230	32,996	13,671,201	148	100,430	94	28,330	31	2,680	41,169	313	37,886
1851.....	31,352	17,496,826 00	12,592	34,687	16,253,453	173	129,840	88	30,925	50	3,998	53,665	430	49,344
1852.....	30,885	17,962,017 00	28,488	48,491	17,193,132	202	147,906	89	23,023	44	4,140	58,379	525	65,757
1853.....	33,374	21,800,648 00	14,783	38,691	20,177,016	192	168,905	103	30,186	50	3,795	66,535	722	84,723
1854.....	30,393	22,346,427 00	13,898	40,612	22,728,825	198	174,535	84	24,200	35	2,946	66,465	773	97,496

STATEMENT, &c.—Continued.

years.	Number of mules over 2 years old taxed.	Value of mules over two years old taxed.	Number of jacks and jennies over 2 years old taxed.	Value of jacks and jennies over 2 years old taxed.	Value of all goods, wares, and merchandize of merchants and commission merchants, &c., taxed.	Money loaned at interest beyond amount over which interest is paid taxed.	Capital in steamboats, ferries and toll bridges taxed.	Value of gold watches and jewelry of all kinds taxed.	Capital employed in manufactories taxed.	Peddlers of merchandize licenses.	Total amount of taxable property.	Total amount of State tax.
1847.....	4,819	$196,779	314	$17,831	$1.311.916	$103,312	$19,184	$48,245	$10,900	700	$27,178,875 43	$70,498 72
1848.....	5.259	233.390	276	21,368	790,426	122.936	29,648	52,173	8,280	200	28,904.596 88	75,178 17
1849.....	6.542	295,989	316	27,150	1,782.304	139,082	20,885	58,147	5,362	750	33.406,612 99	87,936 26
1850.....	7.359	364.594	354	36,135	1,266.423	162,499	23,863	54,963	19.628	125	36,317,832 74	97,003 87
1851.....	8,467	477,254	451	50.371	2,927.344	261,158	14,800	80,371	27,681	175	42,939,515 00	89,637 70
1852.....	9,747	569,448	516	63,663	1 090,760	306.572	22.253	93,045	13,835	25	42,900,080 00	92,970 77
1853.....	11,462	712,637	570	72,607	3,257,405	380,848	65,422	97.096	44,950		53,433,853 00	140.810 01
1854.....	11,894	873,873	554	74,603	1,385,047	405,705	61,945	116,303	16,220		55,377,384 00	146,488 28

Number of acres of land taxed in 1854..... 5,025,926
Value of town lots taxed " $2,535.170
Number of cattle over 2 years old " 161,902
Value " " " $1,701,120
Number of horses and mares over 2 years old taxed in 1854..... 49,213
Value " " " " " $2,766,504

The total population of Arkansas according to the census of 1854 is 247,112 against 209,897 in 1850.

It will perceived from the foregoing tables that the value of taxable property in the State has increased more than 100 per cent. since 1847—a period of eight years.

STATE DEBT OF ARKANSAS.

The total amount of principal and interest of State bonds sold by the State Bank remaining unpaid on the 1st of October, 1854, as stated by the Auditor, was $1,657,553. The assets of the Bank, according to the opinion expressed by the Governor in his message, will be sufficient to reduce this debt to less than $1,000,000.

It appears that the State was indebted, on 1st October, 1854, to the amount of $2,649,856 31, on account of bonds issued in behalf of the Real Estate Bank.

We extract the following account of this debt from the message of Gov. Conway:

The State of Arkansas issued to the Real Estate Bank of the State of Arkansas, 1,530 of her bonds, each for $1,000, and bearing interest at the rate of six per cent. per annum. By the sale of these 1,530 bonds, the bank obtained her banking capital, amounting to one million five hundred and thirty thousand dollars.

By the provisions of the charter, the bank was bound to pay the interest and also to redeem the bonds. The stockholders, 180 in number, mortgaged to the State of Arkansas 141,980 acres of land, valued by commissioners under oath, at $2,603,932 32, as an indemnity to the State and the holders of these bonds, for the payment by the bank, of the interest and the redemption or payment of the bonds. It is represented that the bank paid the interest on these 1,530 bonds up to the first day of July, 1841, and that no interest has been paid by the bank since that date.

Under the act to establish the western branch of the Real Estate Bank, the State issued to that institution 500 more of her bonds, each for $1,000, bearing interest at the rate of six per cent. per annum; and the stockholders—100 in number—under this act, mortgaged to the State of Arkansas 65,121 acres of land, valued by commissioners under oath, at $776,840 06, as an indemnity to the State and the holders of the bonds, for the payment by the bank of the interest, and also for the payment or redemption of these bonds when due. By the terms of the charter, these bonds could not be disposed of at less than par, but the bank, without authority and in violation of law, hypothecated them to the "North American Trust and Banking Company," of New York, on the 7th day of September, 1840, and only obtained upon the five hundred bonds, the sum of $122,389 77. These hypothecated bonds have never been returned to the State, but by the illegal acts of the bank, have been placed beyond her control.

On the 2d day of April, 1842, by a deed of assignment, the assets of the bank amounting, as stated, to $2,405,966 15, were placed in the hands of trustees. When the deed of assignment was made, besides the principal bank at Little Rock, there were four branches of the Real Estate Bank; one at Washington, one at Columbia; one at Helena, and the other at Van Buren. Before the assignment, the State, under the charter of the bank, had two directors at the principal bank and two directors at each of its branches, to guard and protect her interests. But by the deed of assignment, the State was deprived of her representation in the bank. Every officer or agent of the State was and has been excluded. The trustees of the Real Estate Bank and their two officers, the attorney and the cashier and secretary, have had control and management ever since the 2d of April, 1842, of the large fund of assets, stated at two millions four hundred and five thousand nine hundred and sixty-six dollars and fifteen cents, as well as the interest, which, from time to time, accumulated on the debts during this period of more than twelve years and a half. The notes of individuals to the bank drew interest at the rate of eight per cent. and under certain circumstances ten per cent. per annum. The State bonds sold by the bank bear interest at the rate of six per cent. per annum. The liabilities of the bank on the second day of April, 1842, were stated to be $2,230,986 59, being $174,979 56 less than the assets on that day stated to have been placed in the hands of the trustees under the deed of assignment.

The Executive has no official report or information from the bank, showing all its present liabilities and the amount of assets now remaining unexhausted. But it is believed, that if the true condition of the bank were known the present liabilities would be near a million of dollars greater than they were on the 2d day of April, 1842. If this be so now, and if the trustees and officers received $174,979 56 more of assets than the bank owed on the 2d day of April, 1842, certainly the people af this State, and particularly the stockholders, who mortgaged lands to secure the State and bondholders against loss, are deeply interested in having a full explanation and a true statement of the cause of this great deficiency. It seems to me that the interests, credit and honor of the State are too deeply involved, for any officer or legislator of the State to do any act which would tend to suppress or delay such action as is necessary to obtain a full and complete explanation, let the responsibility and accountability fall on whomsoever it may.

Not one of the 1,530 bonds sold by the bank, has been redeemed and surrendered to the authorities of the State. But by a statement of the cashier and secretary, shown in statement marked "O," in the Auditor's report, it appears that on the first of October, 1854, the trustees had in their hands 179 of these bonds, and that the interest on the bonds and coupons taken up, amount-

ed to $143,160, leaving unpaid by the bank 1,351 bonds, upon which the interest unpaid by the bank amounted, on the first of October, 1854, to $1,073,190. But by information from the Treasury Department of the United States, it appears that the sum of $41,947 29, part of the funds which had accrued to this State from the 1st day of January, 1841, to the first day of January, 1853, on account of the 5 per cent. of the net proceeds of the sales of public lands within the State, and on account of the distributive share of the proceeds of the public lands, under the act of Congress of 4th September, 1841, had been retained at the United States Treasury, and applied before the 1st of October, 1854, towards interest due on 500 bonds of this State, which had been issued to the Real Estate Bank, and which are held by the Secretary of the Treasury in trust for the benefit of the Smithsonian Institute. Therefore the real amount of interest due on the 1st of October, 1854, on the 1,351 bonds not taken up by the bank, was $1,031,242 71, making, when added to the amount of the bonds, $2,382,242 71.

It also appears that the bank is indebted for $122,389 77, obtained on the 7th September, 1840, from the North American Trust and Banking Company, on the 500 bonds which the bank hypothecated, and for the interest on the money up to the 1st October, 1854, in the sum of $225,666 31, which added to the 2,-382,242 71, makes a debt of $2,607,909 02, on account of the Real Estate Bank of the State of Arkansas on the 1st day of October, 1854. The bonds sold by this bank will not be due until the 26th day of October, 1861.

By bad management of the banks the faith and credit of the State have received a wound which has retarded her prosperity; but by judicious administration of our public affairs time will heal the wound again.

The State of Arkansas will never repudiate her just debts. She will honestly pay them all whenever she can command the means. When the bonds of the State were issued to the Real Estate Bank of the State of Arkansas, it was never intended that the people should be taxed to pay the bonds or the interest on them, but on the contrary, as required by law, the stockholders, (for security to the State and bondholders for the payment of the bonds and the interest on them) mortgaged to the State 207,-101 acres of land, valued by commissioners, under oath, at $3,280,772 38. These lands embrace many of the best and most valuable plantations in the State. The State has not yet resorted to these mortgaged lands to raise money to pay the interest due on the bonds, and it is deemed safe policy to let them remain undisturbed until the large amount of assets placed in the hands of the trustees, under the deed of assignment, shall have been accounted for and every dollar which can be realized from the assets, sacredly applied towards paying the debts of the bank. After the assets shall have been accounted for and so applied, the balance of the

debt could be ascertained and proper measures adopted to secure the honest payment of every dollar of it without resorting to taxation for that purpose.

The Governor says: The State owes no other debts but small ones, which by the 15th May, 1855, can all be paid from the ordinary revenue in the State Treasury, in gold and silver.

An act directing the Attorney General to file a bill in chancery to divest the Trustees of the Real Estate Bank of the assets of that institution, was passed by the Legislature in January, 1853, and suit has been commenced, as we learn from the message, praying among other things that the assets may be realized and applied to the payment of the debts. But seeing the debt is so small compared with the ability of the State to pay, it does seem to us that it would be much better policy for the legislature to devise a plan by which the credit of the State could be restored without delay than to wait until a decree can be obtained in chancery and the assets applied under its direction. The State is about to enter upon an extension system of public improvement, and with a view to that object the restoration of her credit should be regarded as the initiatory step.

SWAMP LANDS AND LEVEE IMPROVEMENTS.

We collect the following facts relating to the Swamp lands and Levee improvements from the Governor's message and other public documents. Under the provisions of the act of Congress, approved Sept. 28, 1850, the Surveyor General has recommended for confirmation to the State 8,464,943 acres as swamp and overflowed lands; and up to October 1, 1854, the Secretary of the Interior had confirmed to the State and, caused to be certified, to the Governor 5,567,051 acres. The Governor states in his message that "it is safe to estimate that the State is entitled to, and will obtain, in all at least 8,000,000 acres under the act of Congress."

The amount of swamp land sold or appropriated to the levee improvement is stated at 2,857,640 acres. During the last 2 years 3,940,320 cubic yards of levee has been received by the commissioners; and it is stated that "the Board of Commissioners have caused to be levied, and secured from overflow, almost the entire portion of the State fronting on the Mississippi river, and a large portion of the Arkansas river, and considerable portions elsewhere in the State."

The Governor, very wisely as we conceive, recommends "that 2,500,000 acres of swamp land be invested in railroad stocks of the State to constitute a swamp land fund, to keep the levees and other works in repair. This quantity he proposes to divide among the several enterprises in the following manner, viz: 1,000,000 to the Cairo and Fulton railroad, 500,000 to a branch of the Cairo and Fulton road from Little Rock to the Mississippi, 500,000 to a road from Little Rock to Fort Smith, and 500,000 to the Mississippi, Ouachita and Red River railroad.

COMMERCIAL DEPARTMENT.

Commerce of the Crimea.*

Some interest will be felt in knowing the nature and importance of the commercial relations kept up by the Russian province where the allied armies have already obtained a footing. The following sketch will give some idea on the subject:—

Let us first of all remark that the situation of the Crimea is admirable, situated, as it is, between the Black Sea and the Sea of Azoff—that is to say, between the Danube on the west, the Dnieper on the north, and the Kuban on the east, all grand commercial affluents of the European continent, in its eastern portion, and of southern Russia, as likewise of the Caspian basin.

No position could be better for carrying on the international transactions of this part of the globe. The Crimea is, moreover, specially favored in its interior by mildness of its climate and by the fertility of a large portion of its territory, which is susceptible of every culture. In 1835, Mr. Schnitzler estimated its extent at 1,646 square miles, and its population at 400,000 inhabitants, about 100,000 of whom are Tartars — a race which is dwindling away and disappearing before the increase of the Christian population.

Corn, wine, cattle, wool, pelts and furs, hides, hemp, honey, oil, salt, and some fisheries—such are the chief elements composing the wealth of the land, where a transit trade also exists, since here corn and grain, oleaginous seeds, tallow and grease, tobacco, silk, eastern tapestry, and the like, are brought for barter with the stuffs, sugar, hardware, and other articles wrought in Europe, more especially in Russia itself.

Corn constitutes the bulk of the exports from the Crimean harbors — these harbors being adjuncts, we may almost say dependents, on the harbor of Odessa, that granary of the Levant, or rather of southern Europe. According to the official reports for 1851 from the government of Taurida, the corn harvest had increased to 2,568,497 hectoliters. Ten years before it was hardly 1,000,000. It is particularly in the district of Berdiansk, peopled in part by foreign settlers, that the culture of the cereals is most developed, and it is thought that the entire basin of the Crimea, with that of the Sea of Azoff, may supply Commerce annually with 5,000,000 or 6,000,000 hectoliters. Moreover, the Crimea, in 1851, was found to possess nearly 2,000,000 sheep, half of which were fine-wooled, 248,260 head of horned cattle, and 85,700 horses.

The salt mines of Perekop and Eupatoria have some celebrity, and, although very inadequately worked, are a valuable source of

* Translated from the *Journal des Debats.*

wealth to the country. It is also well known what an importance the culture of the vine has acquired in the Crimea, especially the vineyards of Simpheropol, Yalto, and Theodosia. In 1851, their yield amounted to 83,798 hectoliters. The entire vintage of the Crimea — the greater part of which is consumed in the country, and the remainder of which is sold to customers in the provinces of southern Russia—may amount, it is said, to double the figure given above, that is, about 160,000 hectoliters.

The wines exported from the Crimea are, in general, of a secondary quality, and are chiefly used, like those from the Caucasus, for mixing with other wines or with other preparations. The rich vineyards of Prince Woronzoff are much praised. They yield a sparkling wine, something like Champagne. Brought originally from Hungary, the Rhine, and Burgundy, the plants to which the Crimea is now indebted for its wines have almost superseded the indigenous vine of the peninsula. M. de Tegoborski says that the Taurida possessed, in 1848, 35,577,000 vines, a number six times larger than what grew there sixteen years before. The Russian government has at all times made great efforts to develop the culture of the vine in the Crimea, and, to say the truth, it is almost the only culture which has acquired there any importance. Manufactures are at the lowest ebb. There are two or three factories for the weaving of common cloth, a few tanneries, and a few yards for making morocco (Russian?) leather, and that is all.

As for the value of the exchanges carried on in the entire basin of the Crimea and the Sea of Azoff, we will give the figures quoted in the *Annales du Commerce Exterieur*, the best authority on the subject, since it is formed either from foreign statistics, or from the correspondence of our consular and diplomatic agents. In 1841, the estimate was :—

	Imports.	Exports.	Total.
Ports in the Crimea....francs	780,000	2,308,000	3,088,000
Ports in the Sea of Azoff.....	5,208,000	22,088,000	27,296,000

Ten years later, in 1851, the value of the traffic of the Crimea was only 1,747,000 francs, a result showing a great diminution, and for the ports in the Sea of Azoff, 34,084,000 francs, which, on the contrary, shows a great increase. Kertch, placed on the straits separating the Crimea from the Transcaucasian provinces, and Taganrog, situated quite at the bottom of the Sea of Azoff, count for much in this commercial total. They alone exported, in 1851, corn to the value of 7,564,000 francs—a sum almost equal to the aggregate amount from all the other ports.

We must not, however, measure the commercial activity in the ports of the Crimea and the Sea of Azoff simply by the results of the foreign trade. The coasting trade, which is there extremely active, would give almost an equal value of exchanges. The home trade is also of some importance in the Crimea, and it may be

judged of by remarking that there are seventy-nine fairs held there every year. Goods to the value of 2,494,000 roubles (nearly 9,000,000 francs) were brought to them in 1851; and what is remarkable is the fact that, with the exception of the two fairs at Simpheropol, all of them are held in the northern districts, almost exclusively peopled with Christian agriculturists. To sum up, the foreign trade of the two seas, in 1851, employed 1,561 ships, carrying 400,000 tons; and the coasting trade may well have been three times larger.

The coasts of the Crimea offer, in fact, a large number of harbors, that in all times have been eminently useful to ships frequenting these difficult and sometimes dangerous seas. The chief harbors are Eupatoria, Theodosia or Kaffa, Kertch, and Sebastopol, to which we must add, as belonging to the same sphere of commercial activity, the ports in the Sea of Azoff, viz: Berdiansk, Mariopol, Rostoff, and Taganrog. The Genoese thoroughly understood the importance of such a line of coast when, towards the end of the 13th century, they purchased, or rather took, from the Mongol-Tartars the ancient Theodosia, spread their colonies over all Taurida, covered with their ships the shores of the Euxine, and founded Kaffa, which soon became the principal center of Europe's Commerce with Asia Minor, Persia, and the Indies.

Two centuries later, the Crimea was for a long time blighted, as it were, with sloth and sterility; its cultures, its Commerce pined away more and more through atrophy, and the yoke imposed upon it by the Muscovites in 1740 was little calculated to restore it. But, thanks to the franchise granted by the Empress Catharine to its ports subsequently, the peninsula saw its prosperity rapidly return. Unfortunately, the Czar Paul, through some malign inspiration, thought he ought to protect the Commerce of Taurida by canceling this franchise, and replacing it by an oppressive system of customs, with all their restrictive regulations. Nevertheless, the Crimea has progressed by the force of things, by its own elements of vitality, by the constant growth of the Christian population. And, now that the Black Sea and the mouths of the Danube, free at last, are about to be opened to navigation, to all the transactions of the western nations, we may look upon this country as destined for great things.

"Merchants Magazine."

Treaty between the United States and Russia.

A PROCLAMATION.

BY THE PRESIDENT OF THE U. S. OF AMERICA.

Wheras a convention between the United States of America and his Majesty the Emperor of all the Russias was concluded and signed by their respective plenipotentiaries at Washington on the 22d day of July last: which convention, being in the English and French languages, is, word for word, as follows:

The United States of America and his Majesty the Emperor of all the Russias, equally animated with a desire to maintain, and to preserve from all harm, the relations of good understanding which have at all times so happily subsisted between themselves, as also between the inhabitants of their respective States, have mutually agreed to perpetuate, by means of a formal convention, the principles of the right of neutrals at sea, which they recognise as indispensible conditions, of all freedom of navigation and maritime trade. For this purpose, the President of the United States has conferred full powers on William L. Marcy, Secretary of State of the United States; and his Majesty the Emperor of all the Russias has conferred like powers on Mr. Edward de Stoeckl, Councelor of State, knight of the orders of Ste. Anne, of the 2d class, of St. Stanislas, of the 4th class, and of the Iron Crown of Austria, of the 2d class, his Magesty's charge d'affairs near the Government of the United States of America; and said plenipotentiaries, after having exchanged their full powers, found in good and due form, having concluded and signed the following articles:

ARTICLE I. The two high contracting parties recognize as permanent and immutable the following principles, to wit:

1st. That free ships make free goods—that is to say, that the effects or goods belonging to subjects or citizens of a state at war are free from capture and confiscation when found on board neutral vessels, with the exception of articles contraband of war.

2d. That the property of neutrals on board an enemy's vessel is not subject to confiscation, unless the same as contraband of war. They engage to apply these principles to the commerce and navigation of all such powers and States as shall consent to adopt them on their part as permanent and immutable.

ARTICLE II. The two high contracting parties reserve to themselves to come to an ulterior understanding as circumstances may require, with regard to the application and extension to be given, if there be any cause for it, to the principles laid down in the first article. But they declare from this time that they will take the stipulations contained in said article 1st, as a rule, when-

ever it shall become a question, to judge of the rights of neutrality.

ARTICLE III. It is agreed by the high contracting parties that all nations which shall or may consent to the rules of the first article of this convention, by a formal declaratioa stipulating to observe them, shall enjoy the rights resulting from such accession as they shall be enjoined and observed by the two powers signing this convention. They shall mutually communicate to each other the results of the steps which may be taken on the subject.

ARTICLE IV. The present convention shall be approved and ratified by the President of the United States of America, by and with the advice and consent of said States, and by his Majesty the Emperor of all the Russias, and ratification of the same shall be exchanged at Washington within the period of ten months, counting from this day, or sooner, if possible.

In faith whereof, the respective plenipotentiaries have signed the present convention in duplicate, and thereto affixed the seal of their arms.

Done at Washington the twenty-second day of July, the year of Grace 1854.

W. L. MARCY, [L. S.]
EDWARD STOECKL, [L. S.]

And whearas, the said convention has been duly ratified on both parts, and the respective ratifications of the law were exchanged in this city on the 31st ult., by William L. Marcy, Secretary of State of the United States, and Mr. Edward de Stoeckl, his Imperial Majesty's charge d'affairs to this Government, on the part of their respective governments:

Now, therefore, be it known, that I, Franklin Pierce, President of the United States of America, have caused the said convention to be made public, to the end that the same, and every clause and article thereof, may be observed and fulfilled with good faith by the United States and the citizens thereof.

As testimony whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the city of Washington this 1st day of November, in the year of our Lord one thousand eight hundred and [L. S.] fifty four, and of the independence of the United States the seventy ninth.

By the President: FRANKLIN PIERCE.

W. L. MARCY, Secretary of State.

From the New Madrid "Times."

NEW MADRID AND POINT PLEASANT TRADE.

We take this occasion to congratulate New Madrid and Point Pleasant on the acquisition of the new trade that is now turned from another direction to them.

And we cannot pass from this subject, without noticing the great advantage to the interior counties—Stoddard, Butler, Ripley, and Dunklin, in Missouri, and Green, Randolph, Lawrence, &c., in North Arkansas—derived from their new, short and commodious route to the Mississippi river.

All this vast and fertile sections of country can now find a market and a shipping place, within one or two days' drive. And a market and shipping point combining advantages to them over every other place from St. Louis to New Orleans.

They will find all they want at New Madrid and Point Pleasant, on the very best terms, combined with every facility, attention and accommodation.

Henceforth, persons desirous to pass from the East, West may cross the Mississippi river at No. 8, or at Dr. Martin's Ferry, a few miles below New Madrid, also, we learn, at Riddle's Point. We are informed all these places have *good* Ferry Boats, and give them prompt attention. And go through New Madrid county—crossing Little River at Weaversville, on into the interior, without any impediment—to South Missouri, North Arkansas, Texas, or anywhere west, unless the waters should rise, which it is hoped and delieved will not be the case until late in the season.

By the next season we have every reason to believe that this route will be completed and perfected for a permanent and constant travel, and carrying the year round.

The traders and buyers of the interior counties will be able to find supplies of any description, and on the best and most inducing terms at New Madrid and Point Pleasant.

Remember, *here* is the place to get Goods, Groceries and Bargains!

ST. LOUIS MARKET.—December 28th, 1854.

Prices of Produce.

FLOUR—last sales report $7.50 to $8 for extra.
WHEAT—sales to-day, fair to good, from $1.30 to $1.40.
CORN—last sales reported 80 cents per bushel, new gunnies.
OATS—sales 50 to 51 cents per bushel.
BARLEY--sales at $1.35 to $1.40 per bushel.
HEMP—quoted $105 to $123 per ton.
LEAD—$5.95 to $6 asked.
WHISKY—38 to 40 cents, nominal.
HOGS—$3.50 to $4.25 per 100 lbs.
MESS PORK—nominal $12 per barrel.
SUGAR—last sales reported 4¼ to 5 cents per lb.
SALT—G. A. $2.40 per sack.

JOURNAL OF PUBLIC IMPROVEMENTS.

RAILROAD FROM ST. LOUIS TO THE MISSISSIPPI RIVER BELOW FREEZING POINT, AND TO THE ARKANSAS STATE LINE.

We published the second annual report of the President of the St. Louis and Iron Mountain Railroad in our issue of last month—the entire document, containing the Engineer's report, has just come to hand. Regarding the Iron Mountain Railroad as the principal line of connection between St. Louis and the Southern States, we have felt an intense interest in the reconnoisance and surveys which have been going on for some time past in the south-eastern part of Missouri and East Arkansas, and we confess that the connections between St. Louis and the South as shown by the map are not in all respects as favorable as we could desire. To give completeness to our system of improvement, we should, if practicable, have a more direct connection with Cairo, Columbus, New Madrid, and Hickman. We have great confidence in the judgement and professional skill of the engineers, and it is manifest from their report that they have bestowed much labor upon the work, but we still feel a hope that sooner or later a nearer route to Cairo will be found than the one indicated by the map. We copy from the report the following view of the connections of the St. Louis and Iron Mountain Railroad with the South.

Southern Connections with Memphis, Helena, &c.

But however important your road is for its local uses, it is of still greater importance as a trunk road to the South. By a continuation of the road southward to Cairo and New Madrid, a connection is made with the Mississippi river below freezing point, and also with the south-eastern lines of railroad, now almost completed through Nashville to Charleston and Savannah. At the southern line of the State you connect with the Cairo and Fulton road, extending to the south-west corner of Arkansas in direction of Galveston. By this road you intersect any southern route for a Pacific railroad, and must draw, therefrom, much of the business directed to the North-eastern States.

The surveys in Arkansas for the Cairo and Fulton railroad are now complete. The route is stated generally as an easy one, not requiring grades over fifty feet to the mile, and with long stretches of level grade, and easy construction. The cost is estimated at about $21,000 per mile in running order.

An easy route for a railroad is found also along the west base of Croly's ridge, through Arkansas to Helena, connecting you ultimately with New Orleans. Another easy route for a railroad is found between the St. Francois river and the Mississippi river, to Memphis, from which place railroads are now being constructed leading to New Orleons and Mobile. This, at present, is the most important of

any of the southern connections, not only on account of the importance of the business from direct intercourse with Memphis, but also as a very direct route to New Orleans, and one on which the connections are being rapidly perfected. Of the entire practicability of a route to Memphis, there is no doubt.

In this connection, we would advise that your company order a reconnoisance of the route to Memphis, with the view of co-operation with that city to construct the road.

Another and important connection can be easily made, by extending your road to a point on the Mississippi river, opposite Columbus. The Mobile and Ohio railroad touches the river at Columbus, and is now in progress of construction at that end, and by its intersection with the Memphis and Louisville railroad, makes connection for your road to Memphis and Mobile. This connection is an important one, not only for the direct trade of the Mobile and Ohio railroad, but that the present progress of construction on these routes makes it probable that in this way the least length of railroad has to be provided for in order to accomplish the object.

These connections are shown so plainly on a general map accompanying this report, that there is no need for more extended description of them here: but distances from St. Louis may, approximately, be stated as follows:

St. Louis to		Little Rock, Arkansas,	351 miles.
"		Fulton,	477 "
"		Galveston, Texas,	767 "
"		Memphis, Tenn.,	279 "
"	via	Memphis to New Orleans, La.,	676 "
"	"	" to Mobile,	627 "
"	to	Helena,	333 "
"	via	Helena to New Orleans,	685 "
"	"	New Madrid to Nashville,	380 "
"	"	" " to Charleston,	987 "

Before describing the results of the surveys in this State, south of the Pilot Knob, we would remark, that the surveys are not so complete as to determine any positive location for the best route; but that they do demonstrate *one* entirely practicable route to the low grounds; and also that several practicable routes can be found through the section of country known as the New Madrid swamps.

After reaching the low grounds, about twenty miles south of the Pilot Knob, the construction will be comparatively very easy.

Hannibal and St. Joseph Railroad.—Chief Engineer's Report.

COL. R. M. STEWART, *President H. & St. J. R. R.*

SIR:—The line of your road having been definitely located, and all the changes made that are usually required in the corrections of the lines of a preliminary survey, it becomes my duty to make known the effect these alterations have produced in the character and value of the road.

No material change in the quantities has been effected, the correspondence between those of the preliminary surveys and the definite location being unusually close; this may be inferred from the fact, that there is no important difference in the length of the lines, and that both are within nine per cent. of an air line between Hannibal and St. Joseph.

In the following tables will be found the present effective value of the road, which by comparison with table (A) in my report, on the survey and location of the Hannibal and St. Joseph Railroad, (March 7th, 1853,) will show the exact difference in the aggregate. The principal cause of this difference, in measured miles, is occasioned by the adoption of the Bear Creek route instead of Clear Creek, at the eastern terminus.

The Equation of Whole Line by Divisions since Location, compared with Equation of Preliminary Lines.

	Measured Miles.	Relative Distance East.	Relative Distance West.	Average Relative Distance.
First Division	25	33.3	40.6	*35.7
Second Division	25	33.2	36 2	*34.2
Third Division	25	35.7	37.7	36.7
Fourth Division	31.8	56.4	58.6	57.5
Fourth Division	25	42.6	40.7	41.6
Third Division	25	37.3	48.3	39.8
Second Division	25	42.9	45.6	41 2
First Division	25	41.9	33.5	*36.3
Total	206 8–10			326
Preliminary lines	205 7–10			307 3–10
Difference	1 1–10			187 1–10

The construction of that portion of the work which was sub-let in May, 1853, embracing a subdivision from either terminus of the road, has been slowly progressing, and although at no time a very large force has been employed, still the amount of work done in the aggregate is considerable.

The amount, estimated and paid, for work done on the entire line, is in the aggregate two hundred and thirty thousand five hundred and twenty-seven 61-100 dollars, this sum including all estimates on the eastern division up to November 1st, 1854, and on the western division up to October 2d, 1854. Of this amount, the sum of one hundred and sixty-three thousand and eighty-two 92-100 dollars is due to the first subdivision west.

By reference to the estimated cost of each entire subdivision, it is found that the work done, amounts on the eastern to sixty-four per cent., and on the western to twenty-two per cent. of the whole expenditure, due to graduation, masonry and bridging.

The cause of this inequality of expenditure on the eastern and western divisions, it is thought, is well known to the Board; arising partly, from the uncertainty existing in regard to the final location of

☞The divisions marked thus (*) are averaged with double freight towards termini.

the western terminus, and partially, from the difficulty experienced in procuring laborers on the western division, at the commencement of the work.

The second subdivision, extending twenty-five miles on either end, can be readily and speedily prepared for the superstructure, if the requisite means are provided to push the work vigorously, as they each comprise the lightest and cheapest work on the line of road.

And it may not be irrevalent at this time to say, that it is a matter of almost vital importance to the completion of the road within the time specified, that the iron should be laid, and communication opened between the interior counties and the Mississippi and Missouri rivers. In these counties about midway between the termini of the road is to be found the heaviest work on the road, and by far, the least facilities for carrying on the work with rapidity. The country though possessing great natural advantages is thinly settled, and its immense agricultural and domestic capacity, being imperfectly developed, it is illy prepared to sustain the large and sudden influx of unproductive labor which must necessarily be placed in it during the progress of the work.

If a communication could be opened immediately with that country from either terminus, the employees of the company engaged on the work would be relieved in a great degree, from a precarious dependence upon a thinly settled country for supplies, consequently, the work could be pushed forward with greater certainty and economy.

In my former report, of March 7th, 1853, predicated upon data obtained in 1846, it was supposed, that the annual receipts of the Hannibal and St. Joseph Railroad would amount to $600,000; making no allowance for any subsequent increase of population that might have been reasonably expected. In making examinations recently of the census of 1850, and the ratio of increase in population and products, the results are exceedingly interesting and gratifying to the friends of the road. The following is an exhibit of the

Population and Cultivated Land in 1850, *in Counties Tributary to Hannibal and St. Joseph Railroad.*

Counties.	Inhabitants.	Cultivated Land. Acres.	Counties.	Inhabitants.	Cultivat'd Land Acres.
Atchison	1,678	6,477	Grundy	3,006	13,699
Holt	3,957	16,640	Mercer	2,691	10,141
Nodaway	2,118	9,576	Dodge	375	4,106
Andrew	9,433	40,447	Putnam	1,636	2,005
Buchanan	12,975	56,897	Sullivan	2,983	14,108
Platte	16,845	94,496	Linn	4,058	18,851
Clinton	3,786	26,244	Chariton	7,514	34,651
Clay	10,332	71,905	Randolph	9,439	62,420
DeKalb	2,075	8,856	Macon	6,565	33,329
Gentry	4,248	14,246	Adair	2,342	12,243
Harrison	2,447	6,44	Schuyler	3,287	16,121
Daviess	5,298	17,919	Scotland	3,782	23,461
Caldwell	2,316	14,707	Knox	2,894	18,845
Ray	10,373	46,704	Shelby	4,253	22,522
Carroll	5,441	22,437	Monroe	10 541	74,792
Livingston	4,247	23,488	Marion	12.230	62,145
		Total		175,155	920,921

By taking the vote of 1850, and comparing it with that of 1854, the ratio of increase is found to be ten per cent. per annum, consequently, the increase of population in 1857 will be 297,753, and the increased number of acres in cultivation 1,565,565. There will then be in three years from this time, a population within the sphere of this road of 297,763, and the land actually in cultivation 1,565,565 acres, while the total country that will be drained by this outlet, without taking into consideration the vast trade of Kansas and Nebraska, is 11,000,000 acres, a territory equal in aggregate to the States of Massachusetts, Rhode Island and Connecticut. The following table based upon the above data, exhibits the

Anticipated Traffic of Hannibal and St. Joseph Railroad in 1857.

According to the above statement, there will be 1,565,565 acres of cultivated land, and allowing that directly or indirectly, there will be shipped 100 pounds from each acre, we have for the produce tonnage 78,278 tons, which will be transported on an average 100 miles, at 3 cents per ton per mile	$234,438
Estimating that the merchandize imported, including dry goods, groceries, iron, &c., will amount to 40,000 tons, and be transported on average distance of 150 miles, at 5 cents per ton per mile	300,000
The passenger trade being nearly equal to the tonnage on all roads, will probably be so on this, as the Nebraska, Kansas, Utah and Pacific emigrants must pass over it; we will, however, assume the passenger traffic, at 90.000, averaging 100 miles at $3 00	270,000
Three millions bushels of coal are annually consumed in St. Louis. It is estimated, that 250,000 bushels coal will be delivered at each end, with an average transport of 75 miles, making 20,000 tons, at $1 50 per ton	30,000
It is estimated that the lumber trade will amount to 20,000,000 (ft. b. m.) or 30,000 tons, with an average transport of 150 miles, at 2 cents per ton per mile	90,000
Total receipts	$924,834

The Galena and Chicago Railroad extends from Chicago west 130 miles into the interior, occupying a position very similar, as regards its effect upon the business of the road, to the Hannibal and St. Joseph Railroad. The country tributary to it contains about five millions of acres. By the last report of the officers of the Company, its annual receipts were $899,000; the working expenses $359,000.

In 1850, the number of inhabitants contained in the above mentioned limits, was about two hundred thousand, and the number of acres in cultivation, one million.

With reference to the above estimate of the probable receipts of the Hannibal and St. Joseph Rail Road, it may be proper to remark that the population of North Missouri was retarded by various causes, from 1840 to 1850. Previous to 1840, the increase had been nearly two hundred per cent., in the interval it fell off to seventy-five per cent. This was occasioned by the influx into Iowa, Wisconsin, and California. Iowa having increased from 1840 to 1850, three hundred and forty-five per cent., and Wisconsin eight hundred and eighty-seven per cent. We have only assumed an increase of one hundred per cent. for ten years, or ten per cent. per annum; but it is not unreasonable to suppose that the very fact of the construction of this road will increase it fourfold. It is apparent that the increase will be beyond all precedent, for it passes through a finer country than can be found in either of the above States, inferior only in its facilties for

communication with a market; even the agitation of the question of the improvement in its incipiency, produced an immediate and palpable effect. The graduation bill, a new element of increase in the population and settlement of the country, is every day opening new farms, giving increased value to the lands in the rail road districts. The political excitement growing out of the Kansas and Nebraska question is settling these regions with unprecedented rapidity, and will have an important influence upon the trade of the road. Already, great interest is expressed by the settlers in these territories, in the progress of this work, regarding it as their natural outlet east.

Having ascertained the probable amount of business that will be done on the road, it becomes necessary to ascertain the working or operative cost, and deduct it from the total receipts; this is, of course, based upon the tonnage and the known cost of transporting one ton per mile, on other roads, with proper allowance for this road in 1857.

Working Expenses.

Produce,	78,278	tons,	average	100	miles	each ton,	7,827,800
Merchandize	40,000	"	"	150	"	"	6,000,000
Passengers,	90,000	"	"	100	"	each	9,000,000
Coal,	20,000	"	"	75	"	"	1,500,000
Lumber,	30,000	"	"	150	"	"	4,500,000
Total							28,827,800
At one and a half cents per ton per mile							01½
Total operative cost, including repairs							$432,417
Deduct working expenses ($432,417) from gross receipts							924,834

Construction.

Contract cost at $23,000 per mile	$4,738,000	
21,680 tons iron at $45 extra per ton	975,600	
Hard pan and rock	300,000	
Right of way	50,000	
Land expenses (contingent)	50,000	
Engineering at $750 per mile	155,100	
Total cost	$6,268,700	
Net receipts		$492,741

By the above calculation, the dividend is nearly eight per cent. upon the actual expenditure of $6,268,700. But the dividends paid upon the actual cost, to the Stockholders, will probably exceed twenty per cent., and at the end of twenty years thirty per cent.

For instance:

The bona fide stock that will be paid in, is	$1,500,000
State credit	1,500,000
The sale of 600,000 acres R. R. lands will certainly yield	3,268,700
Equal to the total cost	$6,268,700

From the net dividend, $492,417, take $90,000, the interest on the State bonds, and $75,000 for a sinking fund for the redemption of bonds, there remains $327,417 for dividends on $1,500,000 per annum for twenty years, or over 21 8-10 per cent., and at the expiration of twenty years, even if the traffic should not increase, the whole receipts, $492,417, will make a dividend of over 32 8-10 per cent.

If these views are correct, (and I think they can be sustained,) this road cannot fail to be remunerative to the stockholders; if it should

even pay but four per cent., still the stockholders will receive ten per cent. on their investment, and with reference to the amount of transportation on the road, it should be borne in mind that I have not taken into account the numerous branches that will be undoubtedly constructed, and which will vastly increase the resources of the road, and enhance its receipts, nor the effect of its direct eastern connections, to which I have adverted in a former report.

Respecfully your ob't serv't,
JAMES M. BUCKLIN.

TO RAILROAD COMPANIES.

A view of the great number and extent of railroads which have been undertaken in the Mississippi valley, has led us to conclude that the interest of this important branch of public economy would be promoted by fixing upon some paper or periodical at a convenient point as a medium of communication between the various railroad companies and the public.

We have, ever since the commence of this Journal, in 1848, kept constantly in view the railroad movements throughout the United States, and have published such facts as we deemed interesting and profitable to our readers; but having no direct communication with the officers of the various companies, we have omitted to publish much interesting matter which appeared in the Newspapers, lest we should be led into errors, and do injustice to the parties.

Our object in addressing the railroad companies at present, is to invite them to make the Western Journal and Civilian a medium of communication between them and the public. By this means, correct information relating to the history and progress of all the railroads of this region can be obtained from one source, and be preserved in a durable form.

By reference to a map of the United States, it will be seen that when completed nearly all the great railroad systems of the Union are destined to unite at St. Louis, and consequently it must become a great market for traffic in bonds and stocks. A journal published in this city containing reliable information concerning all the public works of the Mississippi valley, would be instrumental in attracting the attention of capitalists and dealers in railroad securities to this point.

Besides, establishments for manufacturing railroad machinery are springing up at various points in the West, and it would be to the advantage of all parties—producers and consumers—to have a common and certain medium of advertising.

We submit these suggestions to the consideration of those more immediately interested in public improvements and manufactures, and respectfully invite their co-operation.

THE

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ARTICLE I.

Commerce and Government.

THERE is no clause in the constitution of the United States which more fully attests the wisdom and statesmanship of its founders than that which confers upon Congress the power to regulate commerce. The sages of the American revolution comprehending the nature and practical operation of international commerce saw that to consummate and establish the independence of this country, it was necessary to subject foreign trade to the control of the national government. They saw that notwithstanding we had achieved political independence, yet, in a commercial aspect, these States were still provinces of Great Britain. For, the agricultural resources of that country having been developed, its mines opened, and its manufactures established, it was evident that without protection to American industry and encouragement to American genius and enterprise, the immense mineral deposits, the water power and other elements of individual and national wealth of this country would remain undeveloped, and for want of proper incentives, the inventive genius of the people would not be called out and directed to useful objects. It was obvious that an unequal contest between the unaided physical strength of the American laborer on one side, and the machinery, artistic skill and accumulated capital of Great Britain on the other, would have been a natural consequence of free trade, especially in the earlier stages of our history.

And it would be a disparagement to the sagacity and patriotism of the statesmen who formed the constitution, to suppose that they did not aim to invest Congress with the power to protect American industry, even without reference to revenue. But to our mind the constitution is sufficiently plain upon this subject. The first clause

of the eighth section of the first article provides, that "Congress shall have power to lay and collect taxes, duties, imposts and excises." This clause certainly contains all that could be deemed necessary to authorize Congress to collect revenue on foreign merchandize, and was doubtless so regarded by the convention. And as evidence that the power "to regulate commerce with foreign nations" was regarded as a distinct independent subject, it was separated from the power to lay and collect taxes, imposts, &c., and granted by the third clause of the same section.

But this wise provision, originating from a deep source of patriotism, and based upon the soundest principles of public economy, has been rendered inoperative by the subtle and continually encroaching influence of foreign commerce acting upon the minds of speculative politicians. The contest between the policy of protecting American industry and the influence of foreign commerce, has been waged without intermission, at least on the part of the latter, from the foundation of our government to the present time. A retrospect of this contest will show that during the greater part of this period, American industry, in some one or more of its departments, has been depressed and paralysed by foreign competition. And whenever, by reason of severe revulsions, the people have demanded and obtained protection against the influx of foreign commodities, but little time would elapse before the influence of foreign trade would again prevail in the councils of the nation, and compel a repeal or modification of such duties as conflicted with the commercial and manufacturing interests of foreign countries.

The modification of the law of 1832, regulating the tariff, is a notable instance of the consequences of legislating for other nations. By the act of 2d March, 1833, it was provided "that from and after the thirty-first day of December, 1833, in all cases were duties are imposed on foreign imports by the act of the fourteenth day of July, 1832, 'entitled an act to alter and amend the several acts imposing duties on imports,' or by any other act, shall exceed twenty per centum on the value thereof, one tenth part of such excess shall be deducted." It was further provided, that a similar deduction of ten per cent. should take place at the end of each subsequent period of two years until the 31st day of December, 1839, and that a deduction of thirty per cent. should be made on the thirty-first day of December, 1841, and that on the thir-

tieth day of June, 1842, the duties on all foreign merchandize should be reduced to twenty per centum.

The consumption of foreign merchandize in the United States, in 1833, was equal to six dollars and twenty-five cents for each individual; which was only about five cents *per capita* above the average consumption of the thirty-three years from 1821 to 1853 inclusive. But under the operations of the tariff of 1833 the consumption of foreign merchandize had increased, in 1836, to ten dollars and ninety-three cents *per capita*, being an advance of seventy-five per cent. in three years. During this period of three years the foreign merchandize consumed, exclusive of specie, amounted to $80,138,428 more than the domestic produce exported: the excess of consumption over the exports in 1836 alone being $52,240,450.

During the same period the public revenue increased and accumulated beyond all former precedent, and the opinion prevailed that the country was eminently prosperous, but the revulsion which occurred in the early part of 1837 exposed the delusion into which the people had been led by the seductive influence of foreign trade. The storm had been gathering for three years, and though its devastations were predicted by many, yet there seemed to be a blind confidence on the part of the people at large, that some favorable change in the current of events would break its force, and protect them from its fury. It was owing in a great degree to this blind confidence in the state of things then existing, that the revulsion of 1837 was so disastrous. Men continued to enlarge their business and increase their obligations until the revulsion came like a tornado prostrating commerce, banks, manufactures, and even agriculture for a time, in one mass of ruins.

We know that the disastrous consequences and the humiliating condition of the country which succeeded the period of excessive importation and consumption of foreign merchandize, to which we have referred, is generally attributed to other causes, but if the subject be analyzed, it will be perceived that those causes were simply effects, produced in a great degree by the act of Congress reducing the rate of duties.

The expansion of foreign trade produced by the reduction of duties in 1833 very naturally produced an expansion of the credit system; banks became a necessary part of mercantile machinery, and were created to facilitate its operations; and to this branch of

the system is to be attributed in a great degree the spirit of reckless speculation and extravagance which ensued.

The embarrassments which prevailed in every department of industry, subsequent to the revulsion of 1837, operated as a check to excessive importations; but the country was not restored to a prosperous condition until after the revision of the tariff, in 1842.

Such were the fruits of the compromise tariff of 1833, and many of the best men of that day live to attest and deplore their bitterness. Yet it would seem that the hard lesson has been taught in vain. For though eminently practical in respect to matters relating to their more immediate affairs, the American people are more liable, perhaps, than any other to be led into follies by abstract theories in politics, and even in morals and religion.

The doctrine of free trade between nations is plausible in theory, and might be admitted as sound in a practical system of public economy, could any two nations be found in all respects equal; but such a case can never occur. The physical and social conditions of no two countries of considerable area can be so nearly alike but that protection to some branch of industry will be necessary to the full development of their respective resources.

Commerce, though a civilizer to a certain degree, is a selfish, insatiable tyrant; and no country or nation can be free but in a limited sense of the term, or control its industrial and financial economy if its domestic trade be materially affected by the influence of foreign commerce. International commerce may be regarded as a unit. It is its nature to form itself into one system, embracing the whole earth, and consequently must have a local fixed center—an imperial seat—where its most distant operations are controlled. And as in imperial governments the more distant provinces are plundered to enrich the capital, so the countries farthest from the center of a great commercial system are liable to be most exhausted by its operations.

At present, Great Britain is the center of the world's commerce, and by reason of the immense trade between that country and this, our industrial pursuits, finances and domestic trade are controlled, in a great measure, by a foreign power. Through the means of our trade with that country we contribute to the support of an expensive monarchy, a hereditary landed aristocracy, an established church, a standing army, the largest navy in the world, and a numerous pauper population. And besides all this, the conductors

of the press, in certain parts of the Union, who seem to have been in search of a cause for the large shipments of specie and the depression in the iron trade, have discovered, as they suppose, that these things have been occasioned by the war between Russia and other nations of Europe. These opinions may in part be true, but are thrown out, as we imagine, to divert the public mind from the subject of protection to American industry. But we desire no stronger argument than this in favor of our cause. For if it be true that our commerce with Europe has become so extensive as to subject us to the burdens and inconveniences of a war carried on in the most remote parts of the continent, we are persuaded that no patriotic American will, after being convinced of that fact, continue to advocate the doctrine of free trade.

What security can the American people have for success and prosperity in any department of industry, if they are liable to be embarrassed and disappointed in their pursuits by war in Europe originating in the ambition, caprice or oppression of its rulers.

If our foreign trade was so regulated as to prevent it from being controlled by the pursuits of other nations, their wars, so long as we remained neutral, would tend to enrich this country instead of embarrassing its financial condition.

So far from regulating commerce with foreign nations, it is obvious to our view that foreign commerce has become a controlling element in the national councils of this country. Its influence is seen and felt not only in the halls of Congress, but in every department of business and society. It encourages the building of ships and the improvement of harbors on the sea coast, but opposes the improvement of internal navigation; it obtains the appropriation of millions, without specific constitutional authority, to establish ocean mail lines with foreign countries, while no provision is made to establish a post road across the continent; in the adjustment of the tariff it discriminates in favor of revenue, and repudiates the policy and even the constitutional right to discriminate in favor of protection to American industry; it creates a prejudice against American fabrics and American artists, and inculcates a taste for foreign commodities, foreign literature, and foreign manners; in fine, foreign commerce is denationalizing the American people, by subjecting them to the encouragement and support of institutions repudiated by their ancestors.

This condition of things is calculated to weaken the bonds which

bind these States together. By degrees the national sentiment has yielded to a sordid love of money, arising, in a good measure, from a desire to indulge in the extravagant follies and social vices of Transatlantic nations.

Internal commerce and social intercourse between the States are calculated to cherish a national sentiment and strengthen the bonds of union, and should consequently be encouraged by the General Government to the full extent of its constitutional power. But Congress is the creature of the people, and with them the reformation must commence. We have shown that our national independence is abridged, that the policy of the Government is controlled and the national sentiment vitiated by the influence of foreign trade, and we respectfully ask the American people if such things consist with their love of liberty and pride of country.

Unfortunately, the regulation of commerce with foreign nations through the medium of the tariff, has been regarded as a party subject for many years past; which has prevented it from receiving that calm and disinterested consideration that its importance demanded. But now, party lines having been broken, and party discipline somewhat relaxed, the present would seem to be a favorable season for the friends of American industry to obtain a fair hearing before the country, and in Congress.

In the adjustment of a tariff all sudden or violent innovations should be avoided, and, more especially, the burdens and benefits should be equalized as nearly as practicable among all classes in every part of the country. No tariff can be permanent which is not adjusted with a view to these principles.

Commerce is an essential element of civilization, and withal, the most complicated department of human industry. It is therefore highly important that the legislator should possess a reasonable amount of knowledge in respect to its principles and practical operations. In this country all public men do not qualify themselves to legislate wisely upon this great subject, and are therefore liable to err in respect to both principles and facts. Hence we have arrived at the conclusion that a *Bureau of Commerce* would be a useful department of the Government. In such a department facts might be collected relating to our trade with every part of the world, which would be useful to the people as well as to Congress. It should be the duty of the individual having charge of a Bureau of Commerce to obtain information relating to the effects

produced by tariff and treaty regulations upon our commerce in every part of the world, and also to ascertain the influence of such regulations upon all the departments of industry in this country. Such information, if collected with fidelity and properly arranged, would furnish a volume of information much needed by the public.

But all arguments and suggestions addressed to Congress are in vain without a change in the public sentiment respecting certain subjects connected with the social condition of the country and dignity of the American character. Labor in the ordinary vocations of society must be regarded with more favor; and the degree of respect awarded to individuals should be determined by the amount of useful labor they perform, rather than the amount of property they accumulate. Honest, intelligent industry should constitute the true basis of respectability, and wealth be regarded as an incident which may elevate or depress the character of the individual in the estimation of the community, according to the nature of the means employed in its attainment and the purposes to which it is applied. A public sentiment formed and governed by these principles would save many from the temptations to grow rich suddenly by speculations and other indirect means. It would correct the habits of extravagance in dress, furniture, equipage, and the many costly appliances of living which now prevail in every class of the community. The poor, and individuals of moderate means, indulge in the use of costly and superfluous commodities, because they regard such things necessary to make them respectable in the estimation of the community, while the rich are driven into extravagances still more absurd that they may be distinguished from the masses.

Though more properly, perhaps, within the province of the teachers of morals and religion, these are, nevertheless, legitimate subjects for the study and treatment of the political economist; for the absurd notions touching the elements of respectability are in a great measure the cause of the excessive importation of foreign commodities. They are the source of an inflated system of credit, and give rise to excessive banking and speculations in all kinds of property. The appliances used to support the appearance of wealth, or at least a state of competency, are too often drawn from, and abridge the means of, the more substantial comforts which

produce a continual state of want and inquietude, where fulness and contentment should prevail.

The public press might do much to correct the evils arising from the false taste and follies of the times, but unhappily its general tone is better calculated to foster individual and social extravagances than to improve the morals and refine the taste of the community. We have no Addisons now to hold the mirror up to folly, and expose the arrogance and shallow pretensions of those who base their claims to social respect upon the appearance or possession of wealth.

But after all, we are not without hope of a reformation in the public policy and public economy of the country. For though the spirit of commercial independence cherished by our ancestors has slumbered for a season, we are persuaded that it is again awakening into action, and if the friends of American industry are but true to themselves and their cause, the time is not distant when instead of being governed by foreign commerce, the United States will control the trade of the civilized world.

ARTICLE II.

From the United States Mining Journal.

The Igneous Theory and the Earth's Natural Laws.

Continued from page 104.

Lead is also a recent production in Cornwall, and even more so than copper. It may be called a surface ore: thousands of tons have been raised within 5 fms. of the surface, and even in the alluvial soil, but we can find none carried into the vallies, as the stream tin. Let us suppose it was in the lodes at the time of the deluge, what was to prevent it from being washed into the valleys, as the tin was? But we cannot find any; it was never washed there. It may be said that lead quickly becomes an oxide, and is gone off in solution, but this requires more time than many suppose. If the lead was then in the lodes, it would now be found in our valleys more plentiful than tin. To prove this, I will refer your readers to North Wales, where a large portion of the lodes are old and decaying; their gossan in nearly every case has become capels, and the lodes in depth only termed by Welshmen joints or strings; though I believe them to be the remains of once large and productive lead lodes, lodes that were rich in early days, and even before the deluge. Fine stones of ore are now to be found in the val-

leys, and known by the name of "tumblers" to Welshmen. The stones are from 1 lb. to 1 cwt., which shows that lead has stood from the deluge up to this day. Look at Nant-y-Mwyn, where the lodes may be seen for a considerable height in the cliff of the mountains, in some places all washed off, and in others, patches may be seen standing, but with little or no lead to be seen in it; but tumblers of lead are to be seen for miles below it in the alluvial soil; in fact, the ground below is streamed equal to any valley in Cornwall. This is said to be done by the Romans for lead. I have seen, myself, stones of 50 lbs. each in the alluvial soil, in ground that was thought too poor to pay for streaming, which is a clear proof that lead would have endured long enough to be found in our streams, if carried at the time of the deluge. Your readers will not suppose that I mean to insinuate all the Welsh lead mines are worked out; far from it. I have no doubt but many of them still contain quantities of good ore, but not to the extent they did at a more early period.

Returning again to Cornwall, I would notice antimony, manganese, and iron; they are all ores of recent growth, and rarely to be found carried into the valleys with the tin. All practicals must be aware that thousands of tons of these ores have of late been found within 30 ft. of the surface; see the Gosmore. It has all been streamed for tin; and near the Indian Queen the manganese has been worked extensively to within 2 ft. of the surface, but it is not distributed over the moor, as the tin is. Iron lodes are now worked in the midst of the moor, all of which are formations far more recent than the tin. The late discovery of antimony at St. Endellion was 7 ft. wide, on a hill, and within 2 ft. of the surface, but none is carried into the valley; had it been there at the time of the deluge, it would have been swept away like the tin.

In further remarking on lodes and strata, I will endeavor to show they are moved by what are termed faults, or heaves, which are produced from new crystallizations, or the decaying of old ones: it is the decaying of one stratum and the growth of another. This, by a careful observer, may be seen in every stage: on one side of a lode they often come to perfection in half the time they do on the other, which must make faults; but it is all a work of time, quietly going on, and nothing like volcanic or sudden eruptions; nothing apparently disturbed.

I am aware that it will be said that we have volcanic mountains still at work; no one will attempt to deny it; but what are they?—nothing more than beds or lodes containing bitumen, or other mineral substances near the earth's surface, which take fire spontaneously, and burn until exhausted; they are rare occurrences, and not equal on the earth's surface to a pimple on a man's face. I admit they form mountains of a known character, but from what? Nothing more than the melting matter that adheres when cooling near the top. It never becomes a stratification, nor do lodes form

in it; minerals ejected from it may form casual crystals. This corrupt ejected matter, when spread over the original layers, is as distinctly to be seen by men accustomed to stratifications, as the sun is by the community at large at noon day. The singular form of these mountains would not allow them to be shown as evidences against our mountains as not being formed by crystallization; they have no similarity to each other.

Every man who has a taste for the wonders of Nature must have noticed the beautiful tree-like crystals found on a frosty morning against the glass of his window, all with their tops upwards. There are but very few, however, who are aware that stones with a smooth surface are to be known on a frosty morning by the same thing; every tree-like form crystalized on them will be found to show its branches tending upwards, as the stone stood when it grew in the earth. The original position may be found from this simple fact 50 years hence. It is a beautiful freak of Nature for our guidance, and a thousand others might be found, if sought for.

I will not carry these subjects further, but would call on my brother practicals to be very particular in noticing and booking every occurrence they see in nature. This will reveal its laws, and be useful to posterity, when we are returned as food to our mother earth.

By way of drawing their attention, I will make some remarks on granite, followed by a few questions, which may throw a shade of light on the apparent obscurity of mining. A great deal has been said from time to time on its being primitive rock, or the basis of the earth, and found to be increasing in heat as we descend in depth. Can any one point out a flow of hot water in deep continuous granite? Is not granite rock so cold in the deepest mines as to make the men avoid sitting on it? There is no perceptible warmth in it. What is real granite? I believe the component parts of the Devon and Cornish granite to be genuine; and wherever it is found, in any quarter of the globe, it produces the oxide of tin. Next look at the outcroppings of granite in Cornwall and Devon, where we shall find the intermediate space filled up with killas or slate. There are various opinions as to the origin of this slate rock formation. I have before said that it is produced by crystallization: then a reason should be assigned for the granite being found in those places. My answer to this would be—It is found between north and south lodes. With the district below Redruth I am not sufficiently acquainted to point out the situation of the most tenacious north and south clay lodes, but will make my start from Peever cross lode, which appears to have cut off the granite of the Redruth district, and would ask if granite is found between that and St. Stephens? I am not aware of the site of the cross-lode that there interposes, but I have no doubt as to one being there, near the western boundary of the granite. It should be noticed that granite at all times alters in character for a quarter

or half a mile before it is cut off. There is another of these killas formations between Luxillian and Liskeard. I am not aware of the situations of the cross lodes in this case.

On the east of Liskeard and Linkinghorn, the granite is cut off by Caradon Wood cross lode; and in the Callington district it again makes its appearance on the east of Holmbush cross-lode, and is again cut off by Devon Great Consols cross-lode; and it reappears east of Wheal Friendship and Devon Burra Burra cross-lode, when it continues on east to Exmouth cross-lode, which terminates all the Dartmoor granite, and it never again appears. If these things were looked into, I have no doubt it would be seen that it is these cross-lodes that obliterate the granite; and in all probability it would be found that our great deposites of tin and copper have formed from the strong magnetic current passing through these cross-lodes; and it is near these terminations or changes, either on the sides or ends of the granite formations, that it accumulates.—These are things certainly worthy the miner's attention, and he should endeavour to establish it as a law, or prove that it would not hold good.

I will here ask the following questions:—1. Can any one point out a lode that is commonly called a north and south one, heaved above a few feet by an east and west lode? If so, what is the character and bearing of each lode?

2. Where is there a heave (and what is commonly called a large one—say 20 fms. and upwards) that has not produced ore of some kind on one side of the heave; and, which are generally the largest heaves, those caused by lodes that meet at about right angles, or as caunters, and which are the most difficult to find?

3. Is there a continuous lode, running north of east (say) 5 or 10 points, that is, or was, a productive copper-bearing lode, except about junctions, or in their passing from one south of east copper-bearing lode to another near at hand? In this case it might produce copper from one to the other; but, when left to its own resources, does it continue good or become poor?

4. Is there a productive copper lode without tin on its back, or tin in some other lode near at hand, (say) within a mile?

5. Is there a continuous and productive tin lode that is not running between south and east?

6. Is there a remunerative tin or copper lode in the two western counties, two miles north or south of visible granite—that is, taking the direct line through the two counties as a guide?

7. Are there remunerative lead mines between the productive tin and copper lodes?

8. Are there any continuous and remunerative lead lodes that are not running between north and east, with the exception of casual bunches, about junctions with other lodes? I might here mention that Great Baddern lead lode runs north of east, counting the tin and copper lodes, and has destroyed their tin and copper bear-

ing qualities; not a single lode of them has again paid for tin or copper until they got into St Stephen's district—in fact, from Truro to Newland may be said to be a lead district: no doubt it is between two cross lodes that cut off the granite. Here is a long distance between the outcrops of granite, and lead appears to have crept in, which is often the case in these situations.

9. Do north and south lodes heave elvans? If so, where is this a large heave? Elvans generally run about east and west. Are there any continuous north and south elvans? If so, do east and west lodes heave them, and where can it be seen?

10. Which have been the most productive lead lodes, those dipping east or west? And which the most productive copper lodes, those dipping north or south?

11. Are there any productive lodes stratified—that is, lode and strata running and dipping at the same angle?

12. Can any one point out a lode productive in iron ore on the back, producing 40 per cent. or upwards to the depth of 10 or 12 fms., that ever turned out to be a productive copper lode in depth?

13. What is the best mineral-bearing direction the stratum can meet a lode in?

14. If two lodes run paralel, at a distance—say, 30 or from that to 60 fms. apart—in what direction should the stratum meet them, to have the same effect on each lode? Or, suppose them to be met, agreeably to the answer to my 13th question, what effect would it have on the second lode? Would it be also productive?

15. Mundic is said to ride a good horse, and many backs of lodes often change from gossan to mundic. Then what are these mundics generally on the backs of good copper lodes, sulphurets, or arseniates of iron?

16. How many kinds of ores found in Devon and Cornwall will produce gossan on the backs of lodes, and what is their character?

Before I conclude, I beg to remark that what I have here advanced is my views. It may not be right in every point, neither am I so bigoted as to think it will meet the views of all; facts are stubborn things, and have ever been met by stern opponents. I trust that any of your readers who may reply will do so with their real names attached, and not with a view of opposition, but to aid a mining public, as we are all well aware that mining, though making rapid strides, is not keeping pace with the age we live in. It is time for the able practicals to step over their assigned bounds, and advance boldly, but cautiously, to its aid, as I am quite sure those of the two counties could collect together a list of facts that must materially aid in reducing mining to something like a science. To do this, the foundation, or ground work, must be first properly laid, and then we should have something to build on. True knowledge is power, and only gained by practice. Theory can but imperfectly teach when laws are well defined. As a proof, I admit having worked lodes myself, in my early days, that I then thought promising, which I

would not now spend shilling on, and thousands of others have done the same. Hitherto, what man has gathered by watchfulness and practice has died with him, on account of his not being able to express his sentiments in a way to lay before the public, and if he did, he found no source open but your Journal to record them, and from which he is deterred through fear of being replied to by some theoretical anonymous. If some talented man who has time on his hands was appointed to record all communications from practical miners, and after analysing and putting them into proper shape, with the senders' name attached, they would form a valuable collection, which should be printed and issued annually: it would be a useful miner's guide. In doing this the miner has nothing to fear; he has only to use his own language, so as to show it is sound common sense; and by way of inspiring them to come forward, it should be made a book of reference for companies when in want of agents to select from. I unhesitatingly say that if a man has not got talent to show something of his works in a book of this description, he is unqualified for an agent.

At present there are three ponderous evils in the balance against mining. The first is a class of men that have received a fair education, and from books have learned the rudiments of mining. They set to work to get up a mine prospectus, employing any tool for an agent who will sanction the most glaring lie: no matter whether he is a carpenter, smith, laborer, or miner, they will endeavor to show him off as some man of great experience, making sure no one will be found with pluck enough to expose them; on they go, cast their net and catch unwary fish at almost every draw; when they manage just as the old saying was repecting prize money —sift the guineas in a ½ in. sieve, those that go through belong to the company, and those that remain in the sieve to the promoters.

The second evil is, agents are selected who are not at all times the right sort of men. They are the friends or relations of those that can make the greatest interest on the mine, and are employed to the expulsion of far more talented men who should have been selected. The third, or last evil, though not the least, is ill directed labor, which is sure to follow. It is these things that pull so ponderously in the balance against money. It is well known that one half of the money collected for mining purposes is not usefully expended on them.

Under these circumstances, were we to labor to the end of our lives endeavoring to bring mining to a science it would be useless, unless we can adopt the means to get it legitimately carried out, which I am confident could be done on a plan that I could suggest, if a few spirited practicals were to combine. It would be gratifying to them when old to know that they had assisted to open the door for the self-taught young practical aspirant to run a race and unhorse their overbearing theoretical opponents.

Article III.

Address of Gen. James L. Minor before the Missouri State Agricultural Society at its Second Annual Exhibition held at Boonville, Oct., 1854.*

Mr. President, and Gentlemen of the Agricultural Society:

Another one of our annual festivals is upon us, and we have assembled again to pay the tribute of our affection, and the homage of our respect to he blessed mother of all the arts. — We have come with an elevated feeling to her temple, where sectional differences, party zeal and personal animosities find no entrance, and where, as I hope will ever be, a spirit of generous rivalry is the presiding genius of its rites. We come here to-day heralded by no pomp and pride and circumstance of glorious war. No roar of artillery, nor millitary pageant announces our assamblage, as one connected with the fierce passions of the human heart, but we bring with us here the quiet assurance of the strength and nobility of that great cause that must ever be the source of all our prosperity, and the steadiest and surest support of our national freedom. It must be a source of congratulation to every true farmer among us as he casts his eye over the assemblage, to witness the continued interest manifested in the welfare of our Society. To promote true agricultural energy and knowledge, I know of no method soe ffectual as an Assocition, like this, which to us is a great Lancastrian School where all alike are teachers and Scholars, where farmers meet on common ground, and where interchange of opinion, result of experiment, comparison of product and of different modes of culture, are the subjects of free and unrestrained conversation.

But while this is a source of congratulation, I regret that we meet to-day, under circumstances not so auspicious as those which greeted our last meeting. Providence, in its wisdom, has withheld from us the showers that are necessary for the opening of some of our crops, and a panic that I hope is groundless, has spread over the land as to the prospect of food. While some of the earlier crops, such as Wheat and Oats, have matured with perhaps an average yield, the Corn crop of the country has suffered beyond any farmer's experience. If this calamity should teach us more economy in the use of our grain, if it should introduce among us a system of culture that would enable our lands to withstand droughts, if it should teach us the best and cheapest modes of feeding and sheltering stock, and if it should teach us beside, the necessity of a greater reliance on Him who holds in his hand the rain and the sunshine, the blast and the mildew, then this misfortune, which seems so general in our State, and which has excited more uneasiness than all the political, religious and social distractions of the Union, will really prove to us a blessing in disguise.

* The publication of the following address has been delayed by reason of a change recently made in the time of publishing our journal, which occasioned an accumulation of matter for the December and January numbers. But we are persuaded that it will not be less interesting or profitable to our readers than if it had been published at an earlier day The subject is one which never grows old with the individual of intelligence and cultivated taste; and in the present instance the author has woven a charm around it which will preserve its freshness as long as the beauties and dignity of agriculture are appreciated.

We belong, Mr. President, to an institution the oldest on record. The first born of the earth were farmers, and yet while all confess their dependence on the labors of the husbandman, it is a little singular that for a period of nearly 6000 years, with the exception of a bright interval during the Greek and Roman Republics, agriculture has been regarded as the occupation of the servile and the menial, as a following, (for it was not dignified with the name of art,) that justified no experiment for improvement, and which, in consequence, entitled its humble followers to nothing else than mediocrity in fortune and exclusion from fame. The world has always been more captivated by the splendid than the useful. The triumphal processions of Consuls and Kings, and Emperors and Sultans, have descended to us in history, while the plow that sent forth its elements of strength to achieve their conquests is lost sight of in the glitter of the pageant. And not only have the tillers of the soil been subjected to this oblivion, but they have been compelled to submit to the injustice that makes synonymous in signification the ancient epithet of the art with those that betoken rudeness and wickedness. The terms villain, hind, clown, boar, &c., have been borrowed from agriculture to express the extremes of degradation and vice, a strange and unaccountable perversion of language that can create an identity of feeling between that art, that by constant intercourse with the works of the creator, elevates and purifies the heart, and the human pursuits and human passions that lead to brutality or degenerate into crime.

Nor has our beloved art ever been to any very great extent the recipient of political favor. Governments have forgotten in their rewards the very elements of their strength. The farmer who by his successful labor has supplied the resources of his rulers, has very rarely been selected to guide the helm of empire, in consequence of that wildest of all fallacies, so prevalent even in this day of intelligence, that one part of mankind must do the *thinking*, and the other part the *working* operations of life. Cincinnatus and Regulus and Gideon, Scipio and Cato and Washington, are bright refutations of this error that denies to agriculture the exercise of thought, the abilities of the statesman or the emotions of the patriot.

War has been to our institution its most unrelenting enemy. With its constant drain of men for the supply of its armies, with its ruthless despoliation of the resources of husbandry, with its indiscriminate destruction of the causes of rural wealth, it has entailed upon agriculture curses equally baneful in the demoralization of whole communities, in increased taxation upon labor, and the habits of plunder and prodigality that so often follow to his home the disbanded soldier, and that utterly unfit him for the active and successful culture of the soil.

Peace has been to agriculture the day of its greatest triumphs. The hand that closed the Temple of Janus has always opened that of Ceres. The return to industrious habits and the consequent security of property, which always happen when men become tired of butchering each other, and the voracious appetite of ambition is sated with blood, form the periods of agriculture's greatest success. The world since the downfall of Napoleon has enjoyed until recently an interval of unexampled peace, and in this period the locomotive, the daguerreotype, and the magnetic telegraph have been added to the world's stores of

usefulness, while agriculture has advanced under the same fostering influence, to a degree of improvement that has never occurred to it in any former period of its existence.

And in gratitude, when agriculture rises as it must rise, like some huge Titan, heaving and convulsing the mountains that ignorance and folly and oppression have heaped upon it, one of its best and earliest fruits will be to command general peace to the earth, to convert the sword into the ploughshare, and to divert the fierce and angry passions of men into channels of individual wealth and national greatness.

I have said that our great art is progressive. It is eminently so. It is moving with the stride and step of a giant. Chemistry, its youngest and best beloved daughter, is bringing its rich gifts with wild profusion and filial fondness. Science and learning now find their noblest fields of operation in the materials that they draw from the earth, and the elements of fertility, they return to her bosom. The arts acknowledge her as their bounteous mother, and a beautiful connection of mutual dependence and support is established between the science of agriculture and the kindred sciences of the earth.

But while that is the present condition of husbandry, it becomes a matter of prime necessity that we should be prepared to take advantage of its progress. The farmer of the country must keep pace with its agricultural improvement. The day is fast approaching when we must be educated for our great occupation, and when training very different and far superior to that now learned by the ordinary modes of seed time and harvest, must be acquired by the tiller of the soil if he expects to realize constant profit from his labors. We must learn to avail ourselves of the science that is now so busy in making agriculture the first and most profitable of human pursuits. We must learn of what our soil consists, what it needs and in what it superabounds. What is the proper rotation to preserve its fertility, what modes of culture to adopt, how to preserve and supply our manures, how to feed and rear cattle to the best advantage, how to rectify the abuses of injudicious cultivation, and, in a word, how to achieve the greatest results with the least expense.

If we in Missouri, with our great advantages, fail to learn these things, we shall soon be left behind in the great march of agricultural improvement, and we shall resemble the snags that remain fixed and stationary in the bed of the noble river that flows at our feet while the current is bearing onward upon its bosom, a commerce as mighty as its own volume of waters, and as unbounded as its own ceaseless flow.

We must remember that *we* already live in the Far West, and cannot emigrate to more fertile regions, when we have reduced our lands to a condition that will no longer support us. By that time California will be full, Texas settled, New Mexico replete with all the population it can sustain, Kansas and Nebraska teeming with their complement of inhabitants, and we shall be compelled by sheer necessity to sit down quietly on our own farms, and feed our lands that they may feed us. Fortunately for us our soil is a good one, and still more fortunately, we shall sooner or later be driven to methods of culture and habits of economy that will decrease our labors, while they increase our wealth.

To enable us to do these things, we all must call in the aid of science. Let me here not be misunderstood. By science I do not mean the processes of abstract calculation and costly experiment. I do not mean the knowledge that requires a lifetime of laborious study, or the highest efforts of the human intellect, but I mean the knowledge of facts and results that are equally accessible and beneficial to all. I do not mean that every farmer must become by means of close closet study a man of science, but I mean this: that he must learn to avail himself of the science of others. As an illustration, we do this daily in the use of domestic and agricultural implements that science, laborious science, has perfected for our use.

To some extent, the farmers as a class are scientific men. They work by the same laws that govern the chemist and even nature herself. They know the effects, on their grain, of the rain and the dew, the frost and the heat, as well as the philosopher, who is often obliged before any of his deductions can be fixed, to avail himself of the experiments of the tillers of the soil.

But there are some things that we cannot learn by our own observation. We cannot tell, for instance, what elements of fertility our soil has or lacks, what portions of it our crops exhaust, and what we must apply to it to restore its virgin freshness. It is true we can find out these things by a series of constant experiments, but these experiments must, of necessity, be slow and expensive. Would it not be cheaper and better to take up a handful of earth, and say to a chemist: "Here, sir, is a portion of my farm. I cannot produce from it crops that will pay me for my labor. Can you tell me, sir, what it lacks, and how I shall supply it?" The answer will be prompt and satisfactory—"I can." And the result of this advice—if the chemist is skillful—will be a crop of double quantity.

If I am met here by the objection that chemists are not always convenient, nor the manures he recommends, accessible, I will answer, that in a few years the first plain principles of agricultural chemistry will be understood by nearly every intelligent farmer in Missouri, and that the diffusion of this important information will be an object of State pride, as its geology is at present.

In answer to the second objection, that the manures may not be convenient, I will reply by the broad assertion, that, in, beneath, and below every arable soil upon the globe, nature has planted the exhaustless sources of perpetual fertility, and that the same causes that originally gave to the soil its productiveness, will work on forever in an unbroken and beautiful chain of exhaustion and supply. These processes are made for use, and it is a part of God's providence that sooner or later we shall be compelled to use them.

It is not for me, a young farmer, to cast reproach upon the farmers of my State, but I am confident that it has occurred to the observation of nearly all who hear me to-day, that many of us cultivate our lands as if we believed that their natural fertility could never be exhausted. Let me assure you that there is no error so fatal to agriculture as this. It has been the bane of every country that was once fertile but is fertile no longer; and I do earnestly trust, and I believe it too, that the increasing light our labors shall derive from science, will check, to a

great extent, and before the remedy becomes necessary, this great waste of one of God's noblest blessings.

Agricultural chemistry has taught us that the Earth is composed of elements that enter, in various proportions, into the composition of different plants, and that if any soil lacks any one, essential to the growth of a plant, it will not mature there. It has taught us also that plants abstract from the Earth many of the elements of fertility, and that it will be necessary to restore them before the soil is capable of producing the same crop; and it teaches us also that some plants deposit an excrement from their roots—that while, perhaps, beneficial to other crops, will be certainly fatal to the original plant, if cultivated in direct succession, and without the application of some corrective.

These simple truths that now startle us with their new name of Agricultural Chemistry, we all knew to some extent before, and by their proper application we must expect to preserve the original freshness of our virgin soil.

In illustration of these simple facts, I will read one or two of the many recorded instances:

FIRST EXPERIMENT.

Mr. Reverdy Johnson, says the "American Farmer," purchased in 1848 a small farm near Baltimore, in the last stages of impoverishment. Such was its reduced condition that the last crop of corn was not more than a peck to the acre. He states that all the vegetable matter growing on two hundred acres of cleared land, including briars, sassafras and other bushes, if carefully collected, would have been insufficient for the manufacture of one four horse load of manure. He applied to Dr. David Stewart, of Baltimore, an able chemist, who rode out to the land, and procured specimens of the farm, which he carefully analyzed. He found that it contained an abundance of lime, potash, magnesia, iron and organic matter, duly mixed with alumin and sand; one element only of fertile soil was wanting—phosphoric acid—and of this there was no trace. He commenced an application to the soil of biphosphorate of lime, a preparation of bones, as the best mode of supplying the deficient element. The remedy was given at an expense of ten dollars per acre. It was the one thing needful—health was restored to the exhausted patient, and the grateful soil yielded last year twenty-nine bushels of wheat to the acre. Nothing else was applied—indeed, nothing else was wanting. Here was a beautiful triumph of science. There is no doubt of the facts. The experiment came under the observation and attracted the attention of hundreds. It was detailed by Mr. Johnson himself, and various other worthy of perfect reliance.

SECOND EXPERIMENT.

If a cabbage be suddenly pulled from the ground, and the dirt washed from the surface of its stem, and it then be plunged in a jar of chemically pure water, the following phenomena will take place: After a short time the water will become milky, and in a few hours several flocculent particles will be seen to descend to the bottom, until, if the cabbage be of ordinary size, and the jar six inches in diameter, a deposit of one inch depth of semi-starch like consistency will occur. If this be poured around the roots of another cabbage, it will kill it—if

poured around a beet, a carrot, or a parsnip, it will materially increase its growth. Thus it will be seen that the excrementitious matter of one plant is pabulum to another, and hence the necessity for a rotation of crops, a plant not being able to grow in the presence of an excess of material unfriendly to or not required by its organism.

Some crops do not throw off excrementitious matter. Thus the onion-beds of Wetherfield have in some instances been grown on the same soil for a hundred successive years. And this, I suppose, is the case with the hemp crop.

Now, it appears from these facts that the earth must be fed to enable it to feed us. It must be supplied with food, as our animals are supplied, if we look to it to reward our efforts, and to render profitable the labor of our hands. I believe it is a conceded fact among farmers, that no well tilled soil can be exhausted, and that the soil can be cultivated each successive year with profit, by a judicious rotation of crops. The earth is a beneficent mother, and never fails to make bounteous returns for all the well directed efforts of the sons of labor. The converse of the proposition is equally true. Ill directed and injudicious cultivation, forcing from the soil successive crops of the same grain, and from which the aliment necessary for their support has already been exhausted, taking from the earth by close grazing the remnant of the crop, and the plants and grasses that Nature, in her recuperative energies, causes to spring up to retard exhaustion and preserve fertility, will soon force the farmer to abandon his system or abandon his home.

I rarely see one of these ill-cultivated fields, covered with a rank profusion of weeds, impeding the farmer's efforts, that I do not feel like making to the owner the same address made by a certain Captain to his men, on the eve of battle: "Men, there is the enemy—if you don't kill them they'll kill you."

We have in Missouri generally a soil that will bear a great deal of improper tillage, and which is easily restored to fertility, for the reason that the sub-soil is of clay. Of all the sub-strata, gravel, sand or clay, the last is the best, on account of its great powers of absorption and retention. As a simple illustration of the qualities in this respect of these soils, I will refer to an experiment that anybody can try:

Fill three jars (common green bottles, without a bottom, reversed will answer, first placing a piece of thin cloth over the hole of the neck,) within an inch of the top with soils, containing the first about 1-6 part of clay and 5-6 of clean sand, well mixed; second one about one-third charcoal and two-thirds clean sand, aud fill the third one with clean sand; then fill up all these with the drainings from the manure heap. The liquor through the pure sand will come out nearly as it went in; the other two will have left much of their color and all their smell with the charcoal and clay which have absorbed them.

And it is seriously recommended to the farmers of Massachusetts to haul clay as a fertilizing compound to their sandy and stony lands. Here we have no such need, for our sub-soil is of clay, and we can bring to our surface by deep plowing this element of fertility. As a further evidence of the fertilizing properties of clay, I need only call to your recollection what every one of us has observed, that clay tak-

en from a well or pit and spread over the surrounding earth, is sure to produce a crop of great luxuriance, deep color and abundant grain.

But because we have this fertilizing substratum, we must not fold our hands and say, "Our lands need no manure—they are rich enough without it — we have beneath us the elements of perpetual fertility." If we acted thus, we should soon learn to our cost, and some of us have learned it already, that there is a wide difference between having valuable substratum, and making its valuable qualities available — as much difference as between the block of marble and the exquisite statue, that only labor and skill can produce from it; as much difference as exists between the reugh ore upon our hills and the locomotive that science extracts from it. No, we must avail ourselves of the means science, (or, if you prefer it, experimental knowledge,) has pointed out.

One of the most important and successful of these means, is a system of deep plowing.

We all remember the story that we read in childhood of the dying farmer who told his sons that there was concealed in the field a great treasure, and they must dig to find it. Taking the old man's word literally, they dug the whole field over without finding the object of their search; but in looking back over the extent of their labors, they were surprised to see an unusual amount of vegetation in the track of their work; and they very wisely concluded that, by the treasure, their father meant the rewards of industrious labor. In inculcating this moral, the fable unconsciously taught the equally great truths of the merits of a deep and thorough stirring of the soil.

The effect of all plowing, whether light or deep, is to "admit air and moisture to the soil, and to permit the roots to travel to a greater depth by loosening the particles of earth." Admitting this, is it not evident that the deeper we plow, the more air and moisture are introduced into the ground, the greater number of particles are loosened, and consequently the effect must be greater?

There is a great deal of wisdom in the practice of the old farmer who followed the rule to sow turnips on the 25th of July, wet or dry.—But, it was objected to him, if there should be no moisture in the ground? "I'll plow until I raise moisture!" And this is not so difficult an operation as one would suppose.

It is well known that, when cold surfaces are exposed to the atmosphere, on a warm day, drops of water will gather on them, by the process of condensation. You have all observed a pitcher of ice-water, even on the hottest days of summer, covered with drops, which is produced by the condensation of the moisture of the atmosphere upon a cold surface. Now this same principle when applied to deep plowing produces its most important results. By turning up a deep soil you present a cold surface to the air, and the moisture not only condenses upon the surface itself, but by pulverizing you increase this process, and enable the atmosphere to circulate among the particles below, which are thus made the continual recipients of the moisture from above. We all know the value of moisture to the soil. The lamentable experience of this year's drought will give to this opinion a painful conviction of its truth. Another good result from deep plowing is the burying to a greater depth the noxious weeds that impede

the farmer's progress through his fields, thereby ensuring a greater amount of manure in the shape of matter that thus becomes decarbonized. Nor does the farmer lose anything in the amount of actual work expended, for where he plows his lands deep, he will find his subsequent labors lessened, and his teams less harrassed, on account of the previous pulverization of the soil.

Another error against which we must guard, is the cultivation of too much land. This is an evil which, in the West, it will take a long time to eradicate. The vast extent and cheapness of our valuable lands —the insane desire of adding acre after acre to our possessions, and the constant practice induced by superficial and improper tillage, of bringing new fields annually under the plow, and the necessity for a superabundance to supply our wasteful methods of gathering and feeding, will, I am afraid, make my words of caution on this subject a labor of love. It will take something stronger and sterner than advice to correct this evil. If it is possible to convince you that you can make two blades of grass grow where only one grew before, it would be easy to convince you that, as a matter of course, one-half of the land would produce the same result. It is not the best farmer, in my opinion, who cultivates the greatest extent of land or raises the largest crops, but he is the best who does these things with the least expense.

I read once a pretty story of a Sicilian peasant that had three daughters. When the eldest was married he gave her one-fourth part of his vineyard, and his annual crop after that was the same. When his second daughter married, he gave her one-fourth, and still his remaining vines bore the same quantity of clusters as before. When the third daughter married and received her equal portion, his harvest was as large as ever. The secret lay in the fact, that he bestowed on one-fourth part the same skill and labor formerly expended on the whole vineyard, and with the same result.

In a trial recently had in Kentucky, there were nine competitors for the premium corn crop of that State, each of whom cultivated ten acres. The average crop was one hundred and twenty-one bushels and twenty-four quarts to the acre, (or, to count by western measure, twenty-four barrels,) while the highest was 189 bushels and one quart —more than thirty-seven barrels. Now it may be objected, that these farmers devoted all their time and labor to these ten acres. On that point, the record is silent. Even if they did, the farmer who raised the largest amount gathered, from his ten acres, 380 barrels—more in all probability than he needed, and more than is made by ordinary cultivation from forty-five or fifty acres, and with less labor no doubt than is bestowed on this last mentioned quantity of land.

But cost his experiment what it may, it was invaluable, because it showed the capacity of the soil, the effect of proper cultivation upon it, and the policy of cultivating less land. If such an experiment shall teach our farmers a system of culture that will add only one bushel more to the acre, it will be cheaply purchased by the sacrifice of the labor of a score of years, for it will add millions to the general wealth.

While the system of cultivating less land will not only add to individual comfort and prosperity, it will also place in a state of rest many of our fields that already require repose, and thus enable them to re-

cover from the atmosphere and the earth the lost elements of their fertility.

As to the other means of successful farming, such as the selection of good seed, early culture, the extirpation of weeds, &c., these so naturally suggest themselves to every farmer that they need only this passing notice.

There is, however, one essential element of success that I can not pass over in silence. It is the use of the best agricultural implements that can be procured. And of these, first in rank, foremost in utility, unsurpassed in its results, and most important in it's action, is the all-glorious plow. Blessed be the memory of the man who invented this great implement of agriculture. His name unfortunately is lost in the unfathomable abyss of antiquity. If known, it would deserve to be inscribed on a monument of the world's gratitude higher than obelisk or pyramid. As we cannot honor the inventor, let us give honor to the invention.

As I have not language to do justice to the value of the plow, I must use for the present the eulogy pronounced on it by a chief of one of the South Sea Islands. A Missionary had arrived there, and with a knowledge of its great value as the aid and pioneer of Christianity, had carried with him a plow, and also a yoke of oxen. The chief and a large crowd of his followers had assembled to witness it's first operation in doing the service that there, as in all savage countries, was done by the females. After the plow had progressed for some distance, turning and pulverizing its neat furrow, the chief could contain himself no longer, but jumping up, he clapped his hands and exclaimed, "Why, it's equal to forty women!" Now, I value my peace in this community too highly to say that any plow ever was or could be invented that would equal forty American ladies, but this I will say, that if that chief was here to-day, after casting his eyes over this bright assemblage, he would admit the impression was the same, chastened and softened, however, by the blended influence over his mind of the useful and the beautiful.

It is a singular fact, that this instrument, though confessedly the most useful of all, should have received so little attention, and been, until lately, the subject of such scanty improvement. That it was an improvement whose usefulness was suggested to every mind, is apparent from the fact that nearly every nation, civilized or savage, used it. The Indians of the sea-coast used for this purpose the bones of fish, and the Indians of the interior the shoulder-blades of the animals they had slain in the chase. Yet, the same plow that was used in Virgil's time, is now used in many parts of Europe, in Mexico and South America, and it is a fact, almost too startling for credit, that it is only about eighty years ago that iron plow-shares were first invented. The plow previous to that period was generally a forked stick of timber sharpened, to which were attached handles and a beam. The effect was only to stir the soil, not to turn it.

The modern improvements made on this implement have been marked by extent, application and variety. For one of these, we are mainly indebted to one of our greatest statesmen, philosophers and patriots, whom all men now delight to honor, and whose name is inseparably connected with the achievement of our liberties. I allude to

Thomas Jefferson. "More than fifty years ago, he was intensely occupied in contriving a mould board of the least resistance, the benefit of which is too well known to every farmer, and I have the authority of a French standard work of the highest reputation for saying, that Jefferson was the first who ever gave any formula by which the proper curve could be given to this important part of the plow, and thus established a fixed rule for what was before a matter of mere imitation—I had almost said of mere accident."

The extent to which the improvement of the plow has been carried since the invention of the iron ploughshare may be known from the fact that, before that period, the plowman could disturb but 1-20 of the weight of soil that may now be disturbed, or in other words, a modern plow can do more then five times the work of a plow before the substitution of iron for wood; and as improvements go on, this disproportion in favor of our plow must be greatly increased. If our mechanics can succeed in combining in proper proportion in our plows economy of material, perfection of shape, greatest possible ease of draft, consistent with a due performance of its powers, they will have given to the world its brightest boon, and laid upon agriculture a debt it can never repay.

But the plow is not the only implement that claims our attention. The reaper comes to our aid, with its life-like movement, at a time when every hour lost by the farmer endangers his crop. The corn crusher, the straw cutter, and the thresher, the wheat fan, the horse rake, and the plantation mill, are all at hand here, to supply man with power, obedient to his will and ready at his call.

With these appliances around us, a fertile soil beneath us, and a genial clime above us, I scarce know a limit to the productive energies of well directed agriculture.

"Oh Fortunati, sua si bona norint."

But with all these blessings agriculture is not so popular as it deserves to be. Too many of our young men consider it as a mere means of subsistence, as too slow and tedious for this fast age, and parents more fond than wise too often educate their sons for professions already overstocked, and send them to cities, and marts of trade, where many a weary hour is spent in waiting for employment, or in the dissipation consequent upon idleness. Business in cities holds out the inducement of speedier and larger profits. But we must remember how very few among the merchants and traders of our country ever arrive at fortune, and let us also remember how very few skillful farmers ever fail to realize it.

Let me counsel my young friends to deliberate well and long in selecting between these occupations of life. In the one, the risk is always uncertain, and the prospect of ruin imminent. In the other, success is as sure as the promise of the Great Jehovah, who has said, "while the earth remaineth, seed time and harvest shall not cease." In the one, there is a constant temptation to vice and immorality, that many a youth has found himself unable to resist. In the other, there is an elevation of sentiment, and a deep religious feeling that always results from a constant association with the works of nature. In the one, there is the close confinement that brings with it the faded cheek, and the premature wrinkle; in the other, there is the ruddiness of

health, and the sweet repose of labor. With many of the rising generation there is a strong ambition to ascend to the higher grades of life, and a consequent disdain for manual labor. Did these young gentlemen ever reflect that there is no situation in life where labor is not required, and that to achieve eminence in any profession or trade, often requires more bodily fatigue than falls to the lot of the agriculturist? If professional and mechanical labor are not considered disreputable, why should agricultural toil be regarded with so much dislike. Labor is necessary to us all, and it generally brings with it the sweet rewards of "health, peace and competence."

"There is not a man from England's King
To the peasant that delves the soil,
That knows half the joys existence can bring
That does not partake of its toil."

Let me tell the aspirant after political and professional fame, that after he has achieved success in his pursuit, and gained the applause of men, which ceases when he retires from the public gaze, that when he looks back upon his successes and his triumphs, he will feel far less true joy in the retrospect, than he, who with a truer perception of the dignity of human labor, has reclaimed from barrenness the fields of his home, has clothed its hills and dales with beauty and with verdure, and has wounded no heart, and crushed no rival spirit in the prosecution of his noble work.

And let me moreover tell father and son in this assemblage, that, before long, agricultural education will assert for itself a place among the highest attainments of the human intellect, that the art, now so despised, will be the chief support of the temple of science, and that, under its fostering influences, more speedily than under any other, will men achieve for themselves the fame and the wealth that are now the objects of such greedy pursuit.

As a class, farmers have learned to depend upon themselves, and it is a gratifying evidence of the prevalence of this feeling that while we contribute to the support of government, nearly all its revenue, we rarely ask any of it back in the shape of favors. While governments spend millions for improvements in the arts and sciences, while it offers premiums for implements of war that destroy human life in the greatest profusion, and in the shortest time, the same records show no favors extended to agriculture, no reward for the improvement of the soil, and no return for the labors of him who in laboring for the cause of husbandry is laboring for the cause of human progress.

As American farmers, we occupy the most desirable position on earth. While in Europe the tiller of the soil owns no land, but works for the landholder, making for himself a bare support, while his labors enrich the favored few; here, every man is or can be lord of his own domain. Every tree that he plants bears its fruit in due season for him alone; every acre is his, to plow and sow and reap and till, just as he pleases, and every dollar that he earns is so secured to him by law that it is a felony to take it from him without his consent. In England, one man out of every 470 is a landholder, or to use the strong language of anothor, "For every one, privileged man, there are 470 who have no right to put sheir foot on any land but the public highway." Here our children stand an equal chance to be President or

Governor, Legislator or Judge, as the children of the wealthiest and the best among us. There, there is an impassable gulf between the children of the rich and the poor, the peasant and the noble. Here food is so abundant that it leads to wastefulness; there, there is a constant apprehension that the scanty meal of to-day may not, through sickness or other accident, be supplied for to-morrow. Here law protects the necessary comforts of a farmer's home; there, a heartless landlord may seize the last bed, and render houseless and desolate the family of his poor tenant. There, one-tenth of the peasant's labor is taken from him to support an established Church; here, we worship God as we please, and no human power can force from us any other than our voluntary oblation to the ministers of religion.

These are some of the points of comparison between the condition of the farmer in America and England; that England whose abhorrence to American slavery is in such strange contradiction to the bondage of her own peasants; that England whose unceasing cry against us for the existence of an institution that her own avarice has brought upon us, is so speedily and so fearfully echoed by the smothered cry of her own white slaves for food, for education and for equal rights.

This comparison of the relative condition of the two classes of farmers, that could be extended almost indefinitely, is enough to satisfy us of our superior advantages, and excite our gratitude to the Creator for such blessings, and teach us to value as dearer than life our civil and religious freedom.

Gentlemen, the surest safeguards of our political institutions are with us, for our agricultural blessings are too numerous, too diversified and too closely connected with individual and civil liberty even to be surrendered at the call of faction, or sacrificed upon the altar of party. Our pursuit is eminently religious in all its bearings, for I defy any man who has the ordinary perceptions of humanity, to walk through fields luxuriant in verdure, through forests in which autumnal hues of every shade are so richly and so beautifully blended, to watch the swelling bud, the waving corn and the golden harvest, and not feel the conviction strong upon him that there is over man, a superintending providence of love, and wisdom and power. Our profession is also the best school of thought, for it tends to relieve nearly every want to which human nature is subject, elevates man, by daily communion with the fairest works of God's creation, and its intervals of repose are intervals of health and security. It is also the loftiest school of patriotism; our homes, our firesides and our fields, are connected to us by ties of love, so sacred and so strong, that no invader of our land will ever reach them save over our dead bodies.

And if it should happen that any foreign foe should set his foot upon our soil, it will be the glorious task and the glorious duty of the tillers of the earth to rescue our beloved land from the degradation of conquest.

Yes, trust to God, to freedom and mankind,
If their chained band-dogs foemen should unbind
These stately forms that bending even now,
Bow their strong manhood to the humble plow,
Shall rise erect, the guardians of the land,
The same stern iron in their same right hand,
Till our hills thunder to the parting sun,
Their sword has rescued what their ploughshares won.

ARTICLE IV.

Valley of the Ohio.

BY MANN BUTLER, ESQ.

Continued from page 93, vol. XIII. No. 2.

Reinforcement under Col. Logan; Retreat of the Indians; Clark's first expedition against the Indians on the Miami and Scioto in 1782; No formidable Indian invasions of Kentucky after this expedition; Rise of the Moravians in Europe and Pennsylvania; Visit of Zeisberger to the West in 1767; Establishment of the Moravian towns on the Muskingum in 1772; Schoenbrunn, the first Protestant settlement made in the valley of the Ohio; An Indian Christian society of 300 or 400 persons established; Indian outrages on the Moravians; Col. Williamson's first party against the same; Second party with the massacre of the unresisting Moravians.

On the 20th, Colonel Logan reached the battle ground, which is about 36 miles from Bryant's station, with 450 men. But the enemy, as had ever been their practice, after great success, had not staid to follow up their advantage with other heavy blows; but had retreated to their towns, on the opposite side of the Ohio. There was no longer any fresh *sign*, and it only remained to bury the melancholy remains of their fellow-countrymen, mangled by the ferocious customs of Indian warfare; torn and disfigured by wolves and buzzards, and swollen by the intense heat of an August sun. These last rites to the dead, of whom Boone says they counted 43 besides others scattered about whom the critical situation and exhausted condition of the troops did not permit them to discover. Col. Logan returned to Bryant's station, and dismissed his troops to their respective homes. Let it not be forgotten that at this time, the fighting men of Fayette county, embracing then the whole country north of the Kentucky river to the Sandy, did not exceed *one hundred and thirty;* while the loss at the Blue Licks amounted to sixty or seventy.

But did the brave pioneers despair under circumstances of such discouragement and distress? This was what they were little inclined to. A retaliatory expedition was soon thought of under the command of Gen. Clark, then stationed at Fort Nelson, at the Falls of Ohio. Every consideration of safety and necessary retaliation dictated the measure, to keep the people from despair and abandoning the country.

A meeting of officers was called at Clark's quarters, where all the measures necessary for an imposing expedition against the enemy were adopted. Volunteers, as has ever been the practice of

Kentucky, poured in—"soon was seen the utmost activity of preparation. Both officers and men volunteered; and beeves, packhorses and other supplies offered by those who could not leave their home.* But in every case where property was offered or impressed (for impressment was authorised where necessary,) it was valued, and a certificate given the former owner, as evidence of his claim to compensation should the government make provision for payment, which at that time was uncertain." "Bryant's station was appointed the rendezvous for the upper part of the country; the Falls of the Ohio for the lower; and the mouth of Licking the point of union" for the different detachments. Gen. Clark assumed the command of this second expedition against the formidable tribes of the northwest, most contiguous and dangerous to Kentucky. Cols. Floyd and Logan commanded the two regiments, into which the body composed of about 1000 mounted men was divided. They assembled at the appointed spot, about the last of September, 1782, and took up their march for the Indian towns on the Miami and Scioto, on the "4th of November, 1782."

The expedition proceeded with the efficiency ever characteristic of its chief, while in the pride of his energy, and reached the first Indian town, the principal one of the Shawnees, on the 16th inst. Immediately detaching strong parties to different quarters, in a few hours two thirds of the town were laid in ashes, and everything destroyed except such articles as might be useful to the troops; the enemy had no time to secrete any part of their property which was in the town. The British trading post at the head of the Miami,† and the carrying place to the waters of the lake, shared the same fate, at the hands of a party of 150 horsemen commanded by Col. Ben. Logan. The property destroyed was of great amount; and the quantity of provision burned surpassed all idea we had of Indian stores.‡ The loss of the enemy was ten scalps, seven prisoners, and two whites retaken; ours was one killed and one wounded. After laying part of four days in their towns, and finding all attempts to bring the enemy to a general action fruitless, we retired, as the season was far advanced, and the weather threatening." The expedition extended its ravages through the different

* Marshall, I, 146.

† Loramie's Store, no doubt.

‡ Gen. Clark's letter to Gov. Harrison, App. copied by the author from the Illinois papers, in the Executive department of Va.

Chillicothes, Pickaway and Will's town, with the same desolating effect.

This campaign trifling as its execution was, in comparison with the slaughter of the Blue Licks, appears to have put a period to the *formidable* Indian invasions of Kentucky. After this time, she was only exposed to straggling and small parties. Such an effect may reasonably be attributed to so overwhelming a display of force immediately after the battle of the Blue Licks.

This year, which had proved so disastrous to the white settlers of Kentucky, and the last, were particularly fatal to the Moravians. These were a sect of devoted christians, better known by their peaceful habits and kind offices, than for any distinguished success of their labors. They are believed to be of German origin, one of the numerous offspring of the free mind of Germany; which, in the general agitation and excitement of the European intellect, during the 16th and 17th centuries, threw off the tenets of the Roman Catholic church. This body of christians, known by the benevolent name of "*Unitas Fratrum*, or *United Brethren*, or *Moravians*," seems to have grown up about 1722, in the Upper Lusatia, a province of Saxony; and principally to have flourished among the simple mountaineers of Bohemia and Moravia. Their tenets, in their technical aspect, which are far short of characterizing the morals or even religion of any people, seem to have been "a general adherence to the Confession of Augsburg," in 1530, which constitutes, it is believed, the foundation of the Lutheran church of Germany, "as most congenial to the views of a majority." "They insist upon individual experience of the practical efficacy of the gospel in producing a real change of sentiment and conduct, as the only essentials of religion."* But this society is chiefly known to us in America, as the unflinching friend of the Indian, and messenger of peace, mercy and industry to the benighted children of the forest. As early as 1742, not more than twenty years after the public notice of those exemplary followers of Jesus Christ, they founded an establishment of Mohicans and Wampanoags near Bethlehem, in Pennsylvania, at Gnadenhutten near Bethlehem, in 1772; at Wyabusha on the Susquehanna. All these societies were successively and forcibly broken up, owing, it is to be apprehended, to the sympathy and devotion to the Indian,

* History of the Religious Denominations in the U. S., purporting to be approved by the Society. 2d Edit. Harrisburg, Pa. 1848. p. 380.

which the surrounding society was not prepared to appreciate. Still the perseverance of these true missionaries of the Cross did not relax. Christian Frederick Post, whose peaceful labors in 1758 among the Delawares has been already commemorated, in 1761 determined to exert his missionary labors among the Indians on the Muskingum, vainly calculating that this might be sufficiently removed from collisions with the white man. Upon the banks of this stream, about a mile from Beaver's Town in Pennsylvania, he built himself a cabin. In 1762, he was accompanied by the well known Heckewelder, as an assistant in teaching and civilizing the children of the red men. The Indians approved of this scheme, and Post prepared to clear a few acres, whereon to raise corn. This instantly and justly excited the jealousy of these sons of nature, who had suffered so constantly and steadily by the approach of the white settler. They told him, they feared that he had changed his mind, for instead of teaching their children, he was clearing land, which if he did, others might do, and then a fort be built to protect them, and then the land might be claimed, and they be driven off, they said, as had always been the case. In vain, Post alleged that he did not wish to be a burden on them, and only proposed to raise his own corn: the Indians replied that he must live like the French priests, who looked fat enough, though they did not raise corn. It was probable the Great Spirit would take care of him, as he did of them, if he wished him to be his minister. So they would only give him a garden spot. This Capt. Pipe, the celebrated Delaware chief, stepped off for Post, and with this, he had to shift as well as he could.*

No other Moravian Brethren visited the West till 1767, when Zeisberger went to the Alleghany river, and established a mission against the will of the greater part of the Indians, who "saw nothing but evil in the white man's eye. The fruits would not ripen, the deer would not stay, where the white man came."

How expressively true and characteristic of the incompatible temper of society in the civilized and the savage condition! The Indians on the Muskingum won over by Post's patient christian spirit, invited his brethren to come and live with him, on their favorite river, away, vain imagination, from the blasting influence of the white farmer. The Wyandots joined in this request. And

* Heckewelder's Narrative.

after mature deliberation, the proposition was agreed to; and on the 3d of May, 1772, Zeisberger with twenty-seven of his native disciples founded Schoenbrunn upon the Muskingum river, the first *Protestant* settlement made within the valley of the Ohio. Here, in imaginary safety, the christian Indians on the Susquehannah and those on Big Beaver removed. Here, about sixty miles from the village of the hostile Indians, "and not much farther from the whites; hence they were called the half way houses of the warriors." Both the parties at war, Indians and white men, passed by or through the Moravian towns, and committed whatever violations of neutrality their resentments or their caprices dictated.

Nor were the Moravians, including their converts, exempt from the suspicions of both parties for being auxiliaries of their enemies. Often, it is said, had their neutrality been violated in favor of the whites, by communicating intelligence of schemes of Indian incursion. The attack upon Wheeling Fort, or Fort Henry, in 1777, had been distinctly announced to the whites by the friendly Moravians; and might not similar warning have been conveyed to the Indians? It would have been but fair between the belligerents, and quite consistent with the Moravian abhorrence of war from all quarters. Here, these exemplary fathers of a Protestant church devoted themselves to christianizing and civilizing the Indians, with signal success. They exerted their best energies to keep down the spirit of war and devastation, so prevalent in a border country by teaching, "that it must be displeasing to the Great Being who made men not to destroy men, but to *love and assist one another.*" In the perilous position which has been described, the pious and philanthropic labors of these devoted servants of humanity were blessed with success, so that they gathered a society of three or four hundred Christians out of these Ishmaelites of our wilderness. The arts of peaceful and civilized life were sown, and were producing much fruit worthy of the good seed; the red man of our forests was, for the *first* time, becoming reclaimed from his ferocity; and the standard of Christian and practical civilization was successfully set up in the wigwams of the savages.

But a blight was coming over this goodly harvest; war with all the fury of barbarism had burst out again between the Indian and his white neighbors. This condition had continued with more or less aggravation through the revolutionary war, until the fall of 1781. At this time the hostility of their unconverted countrymen

broke out against the praying Indians, as the Moravian converts were expressively called; their towns and their property were destroyed, and the missionaries were taken prisoners to Detroit. After some confinement, the British commandant became satisfied of their innocence, and dismissed them to their beloved flock, for whose religious and social interests they had braved such dangers, and suffered such privations, as the pure spirit of Christian philanthropy only could prepare the soul to endure. The Indian converts had, after their capture and removal from their towns on the Muskingum, been left on the Sandusky plains, on the border of Lake Erie. Here, most of their horses and cattle perished from famine. This, too, when the labor of the Christian Indian had raised abundant corn in their Muskingum fields, which they were not allowed even to gather. But the worst calamities of this band of Christian Indians, who seem so unhappily to have been before their time, and out of place, for the enjoyment and propagation of their peaceful doctrines, came from men bearing the name of Christians, as well as themselves; and professing the same mild merciful worship of the Heavenly Father.

About the latter end of this year (1781) the militia of the Pennsylvania frontier, (yet however in dispute with Virginia,) came to a determination of breaking up the Moravian towns. For this purpose a party of men, under the command of Col. David Williamson, proceeded to the Indian villages. They, however, found the towns almost deserted; they had been anticipated in the work of barbarity by the suspicions of the hostile Indians. The few prisoners taken were delivered in safety to the commandant at Fort Pitt.

After a confinement of some time these prisoners were released, nothing, it is presumed, being found against them but their red skins. This excited the deep displeasure of the frontier men, infuriated as they had almost necessarily become by the horrible barbarities of Indian warfare. This release may be considered the remote cause of the subsequent atrocities, which are about to be related.

In March, 1782, the militia of the same portion of the country resolved upon a second expedition against the Moravian towns. Col. Williamson again commanded the men, if command can be applicable to such insubordinate and lawless movements. The party amounted to about eighty or ninety persons, collected without any

public authority, but solely moved by the private determinations of the party, and so far, and no further, is the character of our country saved from some portion of the flagrant enormities, which were perpetrated by this self appointed military body. The object avowed was to remove the Moravian Indians peaceably; but certainly to destroy their houses and their crops. In this way, they wanted to break up the half way asylums for the depredators on the frontier; if they did not, as was perhaps unjustly suspected, originate in these villages. The white party took up its line of march from the Mingo bottom on the Ohio river; and on the second night thereafter, they encamped within one mile of the town of Gnadenhutten, the middle town of the Moravians, which extended on both sides of the Muskingum. When they had reached the river, it was divided into two equal portions, one of which was ordered to cross it about a mile above the town, and to take possession of the western part of it; while the residue of the force was separated into three divisions, one to march above, another below, and a third opposite to the middle of the towns, with orders to occupy them. The detachment intended for the western attack, on reaching the river bank, found no means of conveyance except a large sugar trough designed for holding sugar water, or the sap of the sugar maple tree; even that was on the opposite side of the river. The ice was floating and the waters high, when a young man, by the name of Slaughter, Cassius-like buffeted the flood, and safely brought the trough over. But it was only capable of holding two persons. It was then concluded to place the arms and ammunition of the men in this vehicle, while they should swim over. Thus, at the very outset of the attack, were the invaders placed at the mercy of the Moravians; had they intended hostilities, even in defence of their homes and their families.

When about sixteen men had effected the passage of the river, two of the sentinels who had been posted in advance, discovered a Moravian Indian, by the name of Shabosh; they shot and tomahawked him. The eastern party was then ordered to commence the attack in order to anticipate the alarm which must be produced by the firing. The detachment on the west proceeded to the town on that side where they found the Indians in a cornfield gathering the crop of corn which had been left on the stalk, when they had been hurried off by their own countrymen, in the preceding fall. The Indian party had obtained leave from the Delawares to return

to their old town, for the purpose of getting a supply of provisions to keep their people from starving. Would the situation of a people well be more deplorable than this? Permitted by the mercy of Indians to come back and collect the fruits of their own labor for the support of their suffering people; and at their own towns, while at perfect peace themselves to meet a hostile party of whites, who treated them with a ferocity alone worthy of the corrupt and barbarous superstition which the Moravian Indians had in abhorrence abandoned.

"On the arrival of the white men at the town, they proposed peace and good will to the Moravians; and informed them that they had come to take them to Fort Pitt for their safety. The Indians surrendered, delivered up their arms, and appeared highly delighted at the prospect of their removal; they then began with all speed to prepare victuals to subsist the white men and themselves on the journey.*

After this insidious capture, another party was despatched to Salem to bring in the Indians there who were also gathering corn. They were too successful; the Indians were all brought from Salem to Gnadenhutten. Here they were secured as prisoners, and a council of officers was held to determine their fate. This tribunal would not decide on the matter; but with unmanly and unofficer-like dereliction of duty referred the question of life or death to the men. Upon this the private soldiers were drawn up in a line, and the awful question was degradingly submitted to the men by their own Colonel, "whether the Moravian Indians should be taken prisoners to Pittsburg, or *put to death.*"

Those who were in favor of saving their lives were directed to step out of the ranks; upon this, sixteen, or as some say, eighteen were alone found in favor of mercy. The prisoners were then told to prepare for death. This cruel result seems to have been foreseen by the deceived Indians, when they were once confined in the guard court. They began their devotions by singing hymns; praying and exhorting one another to place a firm reliance on the mercy of the Savior of men. When their fate was announced to them, these devoted people embraced, kissed and bedewed each other's faces and bosoms with their mutual tears, asked pardon of the brothers and sisters for any offense they might have given them, through life. Thus at peace with their God and each others, on

* Daddridge.

being asked by some of those who were impatient for the treacherous slaughter, whether they were ready to die, they answered that they had commended their souls to God and were ready.

The particulars of this atrocious butchery in cold blood of voluntary prisoners, who had committed no offense, without form of trial or shadow of public authority, are too horrible and bloody for detail. Suffice it to say, that the two houses in which the prisoners were confined, were turned into slaughterpens for these betrayed Indians, who were upon the strongest ground of presumption—the suspicions of *both* parties—innocent of white men's blood. There was no exception of age or sex in this massacre perpetrated by misnamed Christians; all perished "at one fell swoop" by these unfortunate Indians. Ninety-six out of one hundred and fifty of these people, fatally confiding in the faith of their murderers, perished in this worse than Indian massacre—worse because committed in disregard of all the lights of religion, civilization and law. Of the number massacred "sixty-two were grown persons, one third of whom were *females*, and the remaining thirty-four were *children*."* The houses and the remains of the dead were then burned together.

ARTICLE V.

From the U. S. Mining Journal.

On the Manufacture of Various Products from Coal.

Professor F. C. Calvert, F. R. S., delivered a most interesting lecture to a scientific audience, at Manchester, (G. B.) on the 22nd ultimo, in which he described at considerable length, the marvellous discoveries of modern science in applying to the arts, a variety of substances produced from coal. His lecture was of the highest interest, and provoked considerable discussion, during which it was stated by Dr. Lyon Playfair, that paraffine candles, specimens of which were exhibited, were not in extensive use, only because that the demand for the simple substance from which they were made was greater than the manufacturers could meet. We append some extracts from Mr. Calvert's remarks, observing that we pass over the Professor's observations on the different theories

* Doddridge, an author who lived among the perpetrators and witnesses of this bloody deed, p. 50. Heckewelder's Narrative, pp. 230, 299.

respecting the formation of coal, the scientific researches as to the relative value of the various kinds, and as to the manufacture of coke, those subjects being so frequently illustrated, and confine our extracts to the chemical products, which are invested with far more novelty.

The Lecturer said, the numerous products which chemists had ascertained to exist in substances distilled from coal may be estimated by the following :

Gases.	*Liquids.*	*Solids.*
Bicarburretted hydrogen.	Bisulphuret of carbon.	Naphthaline
Propyline	Ammonia	Para do.
Light carburetted do.	Eupion	Paraffine
Hydrogen	Paraffine oil	Pyrene
Oxide of carbon	Analine	Chrysene
Sulphuretted hydrogen	Lenkol	
	Carbolic acid	
	Benzine	
	Napthine	
	Napthole	

"The liquid products may be divided into two distinct classes, the aqueous and the tarry; the former of which produced ammonia, which was purchased by chemical manufacturers, and who obtained from it the sulphate of ammonia, for agricultural purposes ; sal-ammonia, used for soldering, and also extensively in calico and print works, in the production of a peculiar style of prints called steam goods; and from these two salts was obtained hartshorn, so much employed in pharmacy and smelling salts. By the distillation of ordinary coal gas liquor, common ammonia was procured, so much used in dye works, and which produced, with litchens, the beautiful colouring matters called orchill and cudbear, valuable for the production on silk and wool of delicate purple hues. The production of this dye was extremely interesting, as the colouring principle called orcine was colourless until acted upon by the oxygen of the air and ammonia.

One of the most interesting and useful applications of the fluids produced from coal was the preparation of ammoniacal alum, a manufacture which had lately become so extensive, that 800,000 gallons of ammoniacal liquor, obtained from the extensive gas-works of the Corporation of Manchester, were annually consumed in producing alum at the chemical works of Messrs. SPENCE and DIXON, near that city. The manufacture of this substance, so useful as an astringent, and also to the dyer and calico printer, furnished a remarkable illustration of the value of chemistry in aiding manufactures and commerce, and to obtain it, the shale which fell from the roofs of coal mines, a hitherto valueless product of the colliery, was turned to an important use. The shale was heaped in large masses, and slowly burnt, in order to render the hard substance porous and friable, and when calcined was put in large leaden vessels with sulphuric acid, having a specific gravity of 1·65, the strength at which it was obtained in the chambers in which it was made. It was not a little singular that the sulphuric

acid could be itself produced from another refuse of coal—the pyrites found in it. The successive processes of crystallization, by which alum of remarkable purity and beauty, which we have all seen exhibited, was furnished to the commercial world, required great practical skill.

A vast benefit would be conferred upon agriculturists, if the ammonia produced by the manufacture of coke were preserved, as recommended by Dr. L. Playfair, who estimated that every hundred tons of coal yielded about six tons of ammonia. The quantity of coke made annually in England amounted to at least 1,000,000 tons, which would yield 60,000 tons of sulphate of ammonia, a cheap and valuable agent in agriculture, which, besides encouraging the manufacture, would enable coke to be sold to the public at a lower price. It was one of the triumphs of chemistry that tons of the salts of ammonia were now manufactured from coal in England, where formerly it was imported in pounds, from a district in Nubia, from which it derives its name, and from Egypt, where it was produced in the form of sal-ammonia, from heating in glass vessels the soot formed by the burning of camel's dung. Alum itself formerly came entirely from the East, then from the environs of Rome, and now through the application of chemistry to manufactures, the progress of human intelligence, and the undaunted perseverance of our countrymen, it was made more pure, and on a greater scale in England, from what had hitherto been noxious and useless refuse products.

From coal tar was obtained, by distillation, a volatile fluid, called coal naphtha, composed principally of carbolic acid, and a heavy oil of tar, a solid substance, called pitch, being also left in the retort, which is extensively used by the Corporation of Manchester in assisting to pave the Streets. A large quantity of this pitch, to which was added tar and asphalte, was heated in portable boilers, and poured in a hot liquid state upon the pebbles and gravel between the interstices of the paving stones, which were thus firmly bound together, and became so durable that the most frequented thoroughfares in Manchester, when thus paved, had not required repairing for several years.

A sanitary advantage connected with this system deserved attention—namely, that stagnant water, or impure matter, could not percolate through the impervious pavement, and collect beneath, giving forth effluvia, dangerous to the health of the inhabitants in large cities, and even causing injurious epidemics. This tar has also been lately applied, when mixed with gutta percha or India rubber, to insulate telegraphic wires, and to prevent metallic substances from being acted on by the atmosphere.

One of the first products which came over in the distillation of coal tar was raw coal naphtha, which, when re-distilled, was sold under the name of naphtha, and burned by the keepers of stalls in streets and markets. When naphtha was again mixed with tur-

pentine, camphine was produced, which was burned in lamps in private dwellings. Rectified naphtha was made by mixing with it 10 per cent. of its bulk of concentrated sulphuric acid, and when the mixture was sold, about 5 per cent of peroxide of manganese was added, and the upper portion again submitted to distillation. This rectified naphtha was used to dissolve caoutchouc to make the substance imperviable to water, known as Mackintosh's patent; and when sulphur was added, and the mixture was submitted to steam at a temperature of from 400 to 600 deg., vulcanised India rubber was produced. Rectified naphtha had received from an eminent French chemist, named Pelouzs, the name of benzine, which had tne property of removing with great facility spots of grease, wax, tar, resin, &c., from fabrics, without injuring the texture or color, or leaving any smell or mark, and had been found in England most valuable in brightening velvets, satins, &c.

"It would prove highly effective in removing oil from dyed wool, particularly in the manufacture of carpets, and will tend to preserve the brilliancy of colour, and render carpets less liable to become faded or dirty. Benzine, when treated with strong nitric acid, produced a substance called nitro-benzine, which was every day becoming more and more employed as a substitute for bitter almonds in flavouring dishes, and communicating scents to perfumery, soaps, &c. It was interesting to observe that thus, by the triumphs of chemistry, a delicious perfume had been produced from the noxious smelling refuse of coal.

"Oils were produced by the distillation, which had been applied with great success bp Mr. Bethel's process to the preservation of wood, which, when so treated, was extensively employed as railway sleepers, and wherever wood work was exposed to the influence of moisture and the atmosphere. The introduction of the fluid into the wood was effected by placing the wood in close iron tanks, exhausting the air, and thus forcing the oil through the whole substance of the timber, under a pressure of from 100 to 150 lbs to the square inch.

"There existed in the light oils of tar a product highly interesting, called tar creosote, which possessed extraordinary antiseptic properties, such, for instance, as preventing the putrefaction of animal substances. In consequence of its peculiar chemical composition, Mr. Grace Calvert had also employed it successfully of late in the production of a valuable dye stuff, called carbo azotic acid, which produced magnificent straw yellows on silk and woollen fabrics. The carbo-azotic acid could be prepared very pure, and at a cheap rate, enabling the dyer to obtain beautiful yellows and greens, not liable to fade from exposure to the air, as was the case with vegetable dyes. The intense bitter which this acid possessed had induced him to have it tried as a febrifuge; and Dr. Bell, of Manchester, had succeeded in curing by its aid several cases of intermittent fever in the Manchester Infirmary. Means

were in course of adoption to ascertain its real value as a substitute for that very expensive medicine, sulphate of quinine. Carbolic acid had been also lately applied in a manner like to prove of great advantage to dyers and calico printers, as a preservative of the mordants to fix colours on cloth.

"The heavy oil of tar used by Mr. Bethel contained a singular organic product, first discovered by Dr Hoffman of London, and called by him "kyanol" or "aniline," which possesses the property of giving, with bleaching powder and other agents, a magnificent blue colour. This substance can be produced from indigo as well as coal tar, and from the great similarity and chemical connection existing between their products, it was extremely probable that they would hereafter be employed as substitutes for indigo and madder. Lament had succeeded in obtaining from naphthaline a substance having a great analogy to the colouring principles of madder, and further chemical researches were likely to produce a rich red colour.

"Mr. Calvert then referred to the remarkable discovery of Mr. James Young of Glasgow—that if coals were distilled at a low temperature, the products were quite different from those produced by distillation at a high temperature, and produced instead of naphthaline the solid lubricating substance called paraffine. This remarkable product must be familiar to the readers of this Journal, and was termed by Dr. Lyon Playfair, in his report on the Great Exhibition of 1851, "liquified coal gas" Mr. Calvert exhibited a beautiful specimen of candles made from paraffine, extracted from coal, mixed with about 20 per cent. of wax. A similar substance can be produced from the distillation of peat, but we are constrained by the claims upon our space to confine our notice to matters of peculiar novelty."

ARTICLE VI.

An Essay on the Preservation of Universal Peace.

BY HON. A. BEATTY.

We are indebted to Hon. Adam Beatty, of Kentucky, for the following excellent "Essay on the Preservation of Universal Peace;" which we are persuaded will be found both interesting and profitable to the intelligent reader. The author is not a theorist merely, but a practical philanthropist, always aiming to attain the ends proposed by the use of adequate and rational means. Hence, he

wisely insists upon the removal, as far as practicable, of all the causes of internal war, as the first step towards Universal Peace among nations. This mode of treating his subject has led him into a full discussion touching the colonization of the African race of this country; which has been regarded by Mr. Clay and other great and good men as the noblest social enterprise of the age.

Though a certain class of our readers may differ with the author in respect to some of his views on political economy and public policy, yet the deep tone of patriotism, the boundless philanthropy and love of justice, which breathe throughout this essay, must challenge respect, and induce them at least to review the grounds of their opinions. Gifted with a sound, discriminating mind, the author has been a close observer of the causes and consequences of events for more than half a century, and surely it cannot be otherwise than interesting to younger men to know the views of such an individual upon subjects touching the future destiny of this mighty republic.—Sr. Ed.

AN ESSAY ON THE PRESERVATION OF UNIVERSAL PEACE.

BY HON. A. BEATTY.

We have the sure word of Prophesy, that a time will come when men "shall beat their swords into ploughshares and their spears into pruning-hooks: nation shall not lift up sword against nation, neither shall they learn war anymore." Isaiah, II, 4.

The preservation of *perpetual peace* among all nations, is an object of immense importance, and should engage the earnest efforts of all mankind.

God could, by the fiat of his will, at any moment put an end to all wars, and bring about universal and perpetual peace among all nations of the world; but in his infinite wisdom, he chooses to accomplish his benevolent designs by human instrumentality. It is the duty of all men to aid, as far as God shall give them ability, in carrying out the plans of infinite wisdom. It is more especially the province and duty of the ministers of Christ, who are laboring throughout the world, to extend the kingdom of the Blessed Redeemer, to promote the cause of *universal peace*, which is chiefly to be hoped for by the spread of the Gospel throughout all the nations of the world. We have the strongest encouragement to labor zealously and unceasingly in bringing about the cessation of *war*, and the establishment of perpetual *peace* among all nations, because we have the assurance of Prophesy, that this great benevolent and God-like work is to be accomplished. We know that, whatever apparent difficulties stand in the way, these may all, with

the blessing of God, be overcome; we should, therefore, never intermit our utmost efforts to accomplish so good a work.

All history evinces the great and unspeakable evils of war. The destruction of many millions of human beings, in every age of the world, and the indescribable horrors attending war-like operations, afford the strongest motives for desiring that there should be an end put to all wars. To these considerations may be added the incalculable advantages which would result from the application of the enormous sums of money expended in preparing for, and carrying on wars, to the purposes of education and other useful objects. It must not be forgotten, that the cessation of war would do away with the necessity of keeping up large and expensive peace establishments, thus burdening the people of every country with enormous taxes for the purpose of supporting a peace establishment, all which would be unnecessary, and could be dispensed with, if wars were at an end, and universal peace should prevail among the nations of the earth. A small portion of the savings of all countries, by the cessation of war, would enable them to establish everywhere common schools and other useful institutions of learning; to cut canals, build railroads, and make other useful improvements; and to improve our waste lands, by draining swamps, and accomodating the interests of agriculture, by affording easy facilities for transporting agricultural products to the places of their consumption, and receiving, in return, manufactured goods and other articles suitable to their wants.

It is not essential that governments—if deemed inexpedient—should apply the vast sums of money saved by the cessation of wars. By leaving these funds in the hands of the people, from whom they are now collected, they could in all suitable cases make the proper application of them to useful purposes, instead of being squandered for the wastful purposes of war.

No one can doubt that wars are the source of immense evils. In the present state of things, *defensive wars* sometimes become necessary, but when nations shall "learn war no more," they will also learn to respect the rights of other nations, and wars of *defence* will no longer be necessary. Weaker powers will no longer be under the necessity of resorting to force to resist the outrages and aggressions of the more powerful. All "will beat their swords into ploughshares." and universal peace will prevail.

How shall this blessed state of things be accomplished? Difficulties are to be encountered, but when we have God on our side, all difficulties will be overcome. His sure word of prophesy will certainly be fulfilled. Let all men then engage earnestly, in full confidence that God will assist in accomplishing the good work, in bringing about universal peace among all nations.

It is difficult to break down the long established *habits* of the nations of the old world. Those *habits* are so firmly fixed as to constitute *apparently* an irresistable barrier to all efforts to over-

come them. In a young nation, like ours, whose *habits* are not yet firmly settled, there is more ground to hope for a successful appeal to reason. Our rapid increase of population, (now about twenty-six millions, and will be doubled in twenty-five years,) will render *defensive wars* wholly unnecessary. Our military strength and great naval power, growing with the growth of our commerce, which will soon exceed that of Great Britain, the most commercial nation in the world, will soon relieve us from any danger from wars of aggression upon our commercial rights. In proportion to our growth, and the extension of our commerce, our influence with other nations will become more and more extensive. The time will soon arrive when no nation will dare to commit agressions upon our rights. Thus we may be enabled to preserve *permanent peace* with all foreign nations.

If we act wisely towards the several powers in America, (comparatively but feeble nations,) treating them on all occasions with *justice* and *generosity*, and exhibiting towards them the most friendly feelings, never, in the slightest degree, encroaching upon their territorial rights, we shall not only preserve peace with them, but acquire unbounded influence in preserving peace among the nations of this continent. If universal peace can be preserved among the nations of the American continent for such a length of time as to afford reasonable hopes that wars on the American continent have ceased, that peace and brotherhood universally prevails, and that these nations have learned "to know war no more," and if foreign nations shall, for a great length of time, witness these events and the unspeakable blessings arising from this happy state of things, the *good example* cannot fail of having the most wonderful effects. They may, for a short time, be able to resist the good example we shall have set them, but it can not be long before the old world will follow the illustrious example set by the nations of America, and thus wars will cease among the nations of the earth.

Nearly forty years have elapsed since peace was concluded with Great Britain. Within that period various differences have sprung up with England and other European powers, arising chiefly out of our commercial relations with them, but all these differences have been adjusted by amicable negotiations. Our commerce is becoming every year more and more important to all the commercial nations of the world; and it is of such great value to them that they are deeply interested in preserving amicable relations with us, because it is only in that way they can hope to enjoy the advantages of our commerce.

The United States will soon become the greatest commercial nation in the world, and her commercial interests will be greatly promoted by the preservation of peace with all nations. Humanity as well as our best interests require that permanent peace should

be preserved, if it can be consistently with honor and a proper regard to our just rights.

Between nations having continual and extensive commercial relations, questions will occasionally arise, under the Law of Nations upon which the parties interested may honestly entertain different opinions. The ablest judges of the common law courts, though perfectly disinterested, not unfrequently differ in opinion on points of law, arising within their jurisdiction. If questions of so much doubt frequently occur, as to give rise to a difference of opinion among the ablest Judges in Common Law Courts and Courts of Chancery, it is reasonable to suppose that questions arising under the Law of Nations may sometimes be of so doubtful a character, as to induce a different construction to be put upon them by the nations between whom such questions may arise. The difference of opinion in such cases may be perfectly honest and consciencious. Each party may be firmly convinced that his construction of the law is correct, and that he has right and justice on his side. In cases of this kind, what is the proper course to be pursued? First, friendly and candid negotiation, conducted in such a spirit as not to impute to each other wrong motives or intentional violations of the laws of commerce. Neither party ought to insist too rigidly upon his own construction of the laws of nations, but rather to compromise upon some reasonable middle ground. If any reasonable effort should fail to compromise the difficulty, then the matter should be referred to some independent nation, to be agreed upon by the parties, or if they cannot agree upon a nation, each might choose one, and those two a third, whose commissioners or a majority of them should finally settle the matter in controversy.

By some such methods all difficulties might be adjusted without resorting to brute force.

War should never be resorted to without extreme necessity—such as gave rise to the Revolutionary war, and the war of 1812, which has been correctly called a second war of Independence, as it was necessary for the protection of our commerce upon the high seas, and the freedom of our sailors from impressment by a foreign nation, whilst engaged in the navigation of our vessels upon the high seas. By acting wisely and discretely in adjusting commercial difficulties, past experience shows that they need never lead to war, which is always attended with a vast expenditure of money and other evils of a more agravated character.

But we must look to a more dangerous source of war, and guard with the utmost care against even the most remote causes tending to bring about dissentions among the several States of the Union. Whatever tends to bring about such dissentions, endangers the perpetuity of the Union; and if the Union should be dissolved, wars will immediately follow.

No greater calamity could befall our country than a dissolution of the Union. The imagination can scarcely conceive of the hor-

rors, devastations and crimes which would follow such a deplorable event. It would put an end to the hopes of the wise and good for a long time to come, that wars are about to cease, and universal peace and good will among men to take their place.

Let us take a calm view of the circumstances which may tend to bring about a dissolution of the American Union, and thus lead to the destruction of the best political institutions that ever were devised by the wisdom of man, aided by the good Providence of God.

The *first* and most important of these is the diversity of sentiment among the people of the United States in relation to the institution of slavery.

Second, differences of opinion arising from the supposed antagonistical *interests* of different portions of the Union—the cultivators of the sugar cane, rice and cotton in the South; the grain growing, hemp and stock raising portion of our citizens in the Middle and Western States, and the manufacturing States of the North-east.

Third, the great extent of our territorial limits which must give rise to a great number of additional States, and the consequent supposed impossibility of carrying on so complicated a government as ours will then have become.

Fourth, the danger arising from the annexation of foreign territory, containing a large population, speaking a different language, and with customs and manners greatly varient from ours.

The first of the circumstances enumerated above, is by far the most threatening. I cannot so well express my apprehensions of the danger arising from slavery agitation as by quoting the language used by the pious and eloquent Dr. Fuller, in a speech delivered at the annual meeting of the Colonization Society, at the City of Washington, on the 21st January, 1851. Dr. Fuller was not a member of the society. Though a Southern man, by birth, he was at the time a resident of the city of Baltimore. He was, therefore, eminently calculated to judge of the effects of slavery agitation, and his language shows that his judgment was wise and discreet.

"Born at the South, educated at the North, minutely acquainted with the sentiments of the North and the South, as I am; in daily contact with Northern and Southern feeling, I utter my most solemn conviction to-night—may God avert the prophecy—that the elements of mischief, the *ignes suppositi*, the concealed fires of a volcano, are gathering under our feet. If something can not be done, nothing will save this country from the agitation of the slavery question, and from the evil—I put my finger to my lips, I cannot go on, I cannot look at it, I cannot speak it, but I see it—that nothing will save this country from the agitation of the slavery question and civil conflict. Your venerable head, Mr. President*—for your days, I fear, are almost numbered, and the

* Mr. Clay.

place which you fill, you will soon see no more; may God Almighty prepare for you a blessed place in Heaven—your venerable head will be reposing in the tomb, and the shout and discord of fratricidal war will not disturb your sleep. But some of us may be young enough to see that dismal hour. Unless something be done, I utter my solemn conviction, when I say that yonder monument will rear itself to the skies, only to have written upon it the epitaph of this Union; or rather it had better be not completed at all; it had better be left, like those unfinished pillars which we see in our church yards, which tell of a life broken off suddenly in its midst; its hopes, its promises, its pride, its prospects all blasted at a single stroke. I love my country with my whole heart. I can say with the Roman, "would that I had a hundred lives to give to my country." I love the Union with my whole heart. May God spread over it the banner of his protection. But much as I love my country, I love *man* even more than I love my country. And it is as the highest achievement of philanthropy, that colonization has my devoutest prayers for its success. In this light it has dignity, it has grandeur transcending the language of thought. Its end is the noblest, which can be proposed by any human mind."

As a farther illustration of the dangers arising from slavery agitation, I give the following extract from the message of the Governor of South Carolina to the Legislature, in 1853. "The history of our country, for the last ten years, affords abundant proof that as long as the United States endures, there is to be *no peace* for the slaveholder. *An eternal warfare* against the rights of person and property, under the associated influence of the people and the States of the North, and the central power, has been solemnly and deliberately decreed. For this reason it is essential that the community of which he is a member, should be prepared, at any moment, for every emergency."

Here is strong evidence of the *feelings* of the South in relation to slave agitation. Citizens of the non-slaveholding States may believe that there are no just grounds for such excited feelings, and may therefore think that no danger can arise from slave agitation. But it is the part of wisdom to view this subject as it is viewed by our Southern citicens ; and the utmost care should be taken not even to afford a plausible ground of complaint, on the part of slaveholders, in those States in which the institution of slavery exists, by constitutional provision.

If indeed it be true, as suggested by Dr. Fuller, in his admirable address before referred to, "that there is too morbid a sensitiveness upon this subject at the South," this will by no means lessen the danger arising from slave agitation. For the South will naturally act upon its own *convictions*, as to what are the true state of facts in relation to an unjust and unconstitutional interference with its rights on the subject of slavery. The danger to the peace of the South does not arise alone from the incessant

agitations of a few abolition fanatics; it is much more deeply seated.

"I believe, (says Dr. Fuller,) many thanks to you, Mr. President, and others, that the *crisis* has passed, but you know that the *danger* to the country *has not passed.* The true peril is that which, I am afraid, politicians overlook. It is the religious sentiment of the entire North; not the abolition, but the religious sentiments of the entire North, with reference to slavery." "Unless something can be done to meet the calm religious sentiment of the North, there will be *a deep and deepening feeling there*, and consequent *resentment* at the South, and a growing estrangement between the North and South."

Calm reflection upon the sentiments expressed in the speech of Dr. Fuller, from which extracts are given above, and upon the message of the Governor of South Carolina, will convince every philanthropic advocate of universal peace that "the *danger* to the country has not passed."

It is in vain to expect that *our example* can have an influence upon European powers, much less upon those of Asia and Africa, in favor of universal peace, unless we can preserve the peace of our own country.

What, then, is to be done? Dr. Fuller truly observes that "society would be subverted by the manumission of such a vast multitude belonging to another race." Such is the unanimous sentiment of the South; and the opinion is equally unanimous that a sudden emancipation of the slave population would be still more disastrous to the black than to the white population, because it would to a domestic war, in which the whites, from their superior numbers, knowledge and skill in warlike operations, would overwhelm and reduce their black enemies to the most lamentable state of degradation and suffering.

What then, I repeat, is to be done? We must look to some practical plan to relieve us from the evils of slavery. "Slavery, (says Dr. Fuller,) is not a good thing—a thing to be perpetuated." There are few at the South who are not willing to admit this. And if admitted, may not this great country come to understand itself? Would it not be oil upon the surface of troubled waters, and a rainbow in our troubled sky? Might we not hope that, at length, an equilibrium would be restored to our moral atmosphere, if these concessions were made? If the fanatics of the North would cease to denounce every slaveholder as an abomination and an iniquity, and if the fanatics of the South would cease to advocate the perpetuation of slavery as a blessing, it seems to me that a common platform, and a middle ground of love and brotherly feeling might be found, upon which all good men might stand, and in a spirit of love and generous philanthropy, consult as to the duty we owe the race which in the Providence of God is placed in our power. We of the South, cannot see any project contem-

plating the continued residence of the African population among us, which we regard as worthy of our attention."

How then shall we dispose of the African race?

"There stands Liberia, (I again quote from the eloquent speech of Dr. Fuller,) a republic which, though of yesterday, is already commanding the attention of the oldest cabinets of Europe, and has taken her place among the nations. The state papers of that young republic compare quite favorably with similar documents in this country, and I do say that the last message of her Governor is superior in good common sense, in talent and in literary merit, to communications, proceeding even from the executive departments of some of our States.

No candid man will deny to the African, powers which if unfolded, would raise him to an equality with other men: but these powers can never be unfolded in this country. What prospect has the coloured man? Is the bar, the pulpit, the medical chair open to him? Can he ever hope to take a seat in the capitol? Can he acquire the honors and appointments of this government? Above all, can he ever enjoy, what is most important to mental development, I mean the quickening, invigorating influences of the highest literary society. To propose these is to answer them. And how sad a lot it is for a human being, that neither he nor his children can ever aspire to the same honors as his fellow-men?

I will only mention one other sore calamity attending the conscious inferiority of the free black man in this country. He not only belongs to an inferior caste, but to a distinct race, and that race in continual contact with another race, who enjoy, above all people upon earth, the very advantages from which he is excluded. We live in a country where, let a man be but a white man, and he need not look up to any other human being as his superior by birth. (Applause.) There is no emolument, no honor to which he may not elevate himself. The proudest places in this land have been and are now adorned by men who have been the architects of their own greatness, and have won their way, in spite of a thousand obstacles, by the patient force of a true heart and an unconquerable will. I can point to such a man not very far from me. (Referring to his Excellency the President of the United States, the Hon. Millard Fillmore, who was next him.)

All this the free coloured man sees and knows. He sees and knows, too, that it is nothing but his colour—the colour given him by his God—which shuts him out from this noble and ennobling competition, and what must be the consequence upon him? It is impossible, but that the worst passions, envy, malice, vindictiveness, if not atheism, will rankle in his bosom, rendering him unhappy to himself and dangerous to the State. Already we have, here and there, fearful premonitions flashing up, now and then. Let me tell you that nothing but fear represses the utterance, loud and deep, of passions, which will only be the more fearful because

they cannot find any vent. If the free coloured man is to live in this land, he must be raised to social equality, and amalgamate with the white man, which will never be, or else he will be discontented and unhappy. He were unfit for freedom, and not a man, if he could be satisfied with his condition.

Up to this point, Mr. President, and beloved hearers, I have been speaking of the free coloured population of this country. If we regard the enterprise only with reference to them, how wise and beneficient is it? For my part, I was very glad the other day, that the fine little State, where I first drew breath, and which is only dearer to me because it has been so much misunderstood and misrepresented—I was glad to see South Carolina refusing to repel from her bosom her native free coloured people. I trust that she will yet unite with Georgia and Tennessee, and Virginia, and my adopted State, equally dear to me, Maryland, in transporting these people to a more congenial home.

All good men have mourned that this metropolis of our land has been so often the scene of wrath and bitterness and strife among those who are descended from such parents as the founders of our Republic, and who are bound together by such ties, and ought to love each other as brethren. Let us rejoice to-night that here all is peace, harmony and love—love to God, love to one another, and love to the whole human family. We are gathered here to-night, not in an arena for sectional contests and conflicts, but in a temple where, with one heart and one mind, we are consulting for the success of an enterprise which turns into utter contempt all the petty ephemeral issues of selfish intrigue and political ambition." (Applause.)

God grant that the whole nation may cousult and counsel together with cool and deliberate minds, and in the true spirit of Christianity, in relation to the benevolent and sublime enterprise of sending back to Africa her long lost children. If this important subject is entered upon with the pure and genuine feelings which pervaded the enlightened assembly which was eloquently addressed by Dr. Fuller, the most sanguine hopes may be indulged that much good will be the result. The wisdom and intelligence of the whole nation ought to be consulted, and a plan devised, the best calculated to carry out the benevolent design, without, in the slightest degree, encroaching upon the constitutional or legal rights of any State or citizen of our great confederacy.

It was a saying of the celebrated Swedish Counsellor, Oxenstiern, "*Quam parva sapientia regitur mundus*," with how little wisdom the world is governed. Such is not the case in relation to the colonization of our colored population. The greatest, the purest, the most enlightened wisdom should be brought to bear in carrying out such a system as will best promote, and most certainly accomplish the great work of freeing our country from the evils of slavery.

The complete accomplishment of this benevolent and highly useful work will require considerable time. If an *unlimited* amount of funds were at the command of the society, it could send to Liberia annually no greater number of colonists than that republic could conveniently and certainly provide for, consequently *patience* must be exercised by the friends of colonization. The great object, at present and for some time to come, should be to encourage the rapid growth and improvement of the Republic by promoting its commercial and agricultural interests, so as to afford increased facilities for the reception of emigrants and colonists from the United States. At present, only so many can be sent as the resources of the Republic will enable it comfortably to provide for. If the society can only realise funds sufficiently to send annually to Liberia this limited number, it will be all that is requisite for the present. This number may be annually increased, accordidg to the increased ability of the Republic to receive emigrants and colonists. In the meantime, Liberia will be rapidly increasing in population by nalural causes, by the amalgamation of native Africans, and by an increased number of emigrants and colonists, in each successive year. For the present and some years to come, persons of colour, already free, and those voluntarily emancipated, will afford full employment for all the means of the colonization society. Thus, by the time a proper system of gradual emancipation can be adopted, the capacity of Liberia for the comfortable support of emigrants and colonists will be so much enlarged, that a greatly increased number may be yearly sent to the Liberian Republic.

To be continued.

ARTICLE VII.

Russian Gold Mines.

A work of authority on the manufacturing powers of Russia was published some years ago by a Mr. PRELEZYNSKI, and he made the average annual produce of silver 43,200 lbs., and of lead 1,440,000 lbs. The aggregate produce of copper, both from the Government and from private mines, he returned at 7,596,000 lbs. All the gold raised at the Ural mountains is coined in the country, and he makes the quantity extracted from the Ural mines, and coined, in the ten years intervening between 1824 and 1834, 117,564 lbs., and the value, 7,143,499*l.* Platinum is also found in Russia, and is likewise coined into money, and we are told that of this rare metal there were extracted from the Ural

mines, and coined, within the same years, 28,125 lbs., value 393,737*l.*

The Russian measure, the pood, is about 36 lbs. avoirdupois, and the gold produce of Russia in 1846 was—private mining, 1490 poods; public mining, 187=1677 poods. The total quantity obtained in 1847 was 1779 poods. The produce in the ten years, 1837—46, was 8387 poods of fine gold, amounting to 366,848 lbs., value 18,751,310*l.* The produce of platinum in 1843 was 213 poods=7668 lbs., and the quantity of silver obtained in 1847 was 1190 poods.

Sir Roderick Murchison had, early in the summer of 1840, visited the gold regions of Siberia, and, in a paper read before the Geological Society of London in 1844, stated the entire gold produce of the Russian empire to be then nearly three millions sterling. The very elaborate work published by him and his colleagues, MM. de Verneiul and Count Keyserling, appeared in 1845; and it may, perhaps, be fairly assumed, that since they geologically surveyed the Ural Mountain district, the produce has not been stationary, but has rather advanced.

Gustavus Rose, a German writer, published at Berlin, in 1837, an account of the gold workings of the Russians in the Uralian district, and states that the auriferous sand principally occurs on the eastern declivity of the range. The sand from which the gold is at present extracted contains from about 1-2280 to 1-1920 part, and the expenses of washing and extracting commonly amount to two fifths of the net produce. According to Mr. Rose, sand is sometimes found in which 1-600 part, or even 1-300 part, proves to be gold, and it is his opinion that, under good management, sand containing only 1-7680 part of gold could be washed with a fair prospect of profit. It does not appear that any efforts have been made to procure gold by crushing, or by any of the improved processes which the superior intelligence and activity of the Anglo-Saxon race have recently introduced. The platinum mines are situated on the western declivity of the Ural Mountains, and the proportion of that metal is stated to be very much larger than that of gold, amounting on an average to 142 part of the whole mass. Pieces of pure platinum have been sometimes found, weighing several ounces, and even, in some instances, over a pound. A small quantity of gold is sometimes united with platinum, and platinum has been itself discovered between layers of serpentine.

The gold mining system of Russia is thus described by a recent writer, Mr. Cottrell, and it would appear to be rather a fair and reasonable one. Every freeman in Russia, not being a Government *Employé*, is at liberty to search for gold; and if an explorer be successful, he announces the fact to the Government, and applies for permission to avail himself of the discovery. A mining officer is then sent to examine the spot, and to mark out a district of about two English square miles, of which the explorer

is put into possession, so far as regards gold searching. The speculator is then at liberty to build huts, and to hire and locate laborers in them, who are generally persons who had been exiled to Siberia. At the fall of the year, when the intense cold impedes further operations, the gold procured is taken to a Government office in the nearest town, where it is weighed, registered, melted, moulded into ingots, assayed, and accurately valued—the ingots are then transmitted to St. Petersburg, and coined into money, which is paid to the speculator, the authorities deducting a small per centage for the purposes of the State. The Government is anxious to encourage such enterprises, and does not, therefore, press very heavily upon the adventurers. The returns are, however, precarious, and our author records one instance where a speculator in gold expended 35,000 roubles out of 40,000 of borrowed money, before any fruits resulted—but fortune then showered so bountifully upon him, that in the course of a few years he became a millionaire.

WESTERN CITIES.

From the Lexington Express.

LEXINGTON, MO.

In 1838 the ground now occupied by the City of Lexington, was a dense forest. In that year the city was laid out; and up to the year 1851, when much capital was diverted to California, improvement went on in a manner only known to western towns. Since 1851 a large amount of capital has been employed in California and New Mexico, and many enterprising mechanics and others have gone thither, which has, to a considerable extent, checked the growth of the city. The population, however, has continued gradually, but slowly, to increase, and an unoccupied house is rarely to be found in Lexington.

The whole number of houses within the city limits, including business houses and shops, is 550. Of these buildings a very large proportion are of brick, substantially built, and many of them of very large size, and conveniently arranged and well adapted to the purposes for which they were designed. The number of dwelling houses, of which a considerable amount display much taste and elegance of structure, is 415. The number of inhabitants is 3,320—making the very large average of eight souls to each dwelling; and notwithstanding the enormous prices at which houses rent, persons employ their capital in other ways more profitably than in the construction of houses for rent.

The public buildings in the city are all large, handsome, and well built of brick. They consist of a Court House, Clerk's Offices, and Jail—well built and of ample dimensions. Two Colleges—Masonic College, for males, the Lexington Female Collegiate Institute, and one public school. All these edifices are of brick, and though they display but little architectural beauty, are well designed for comfort and convenience—each being ample for the accommodation of 175 or 200 students.

In the city there are eight Churches of as many differest denominations, with an aggregate of 989 communicants, to-wit:

Roman Catholic	70	Methodist Episcopal	168
Episcopal Church	57	German Methodist	10
Presbyterian [Old School]	125	Baptist	299
Cumberland Presbyterian	100	Chistian	160

All these denominations, except the German Methodist, have excellent brick churches, in which they regularly meet for worship.

At this time the number of students in actual attendance at Masonic College, is 124; in the Female College, 110; in the Public School, male and female, 150. Besides these are Ingleside Select Seminary for young ladies, by Miss LONG, 33; Miss HAWKIN'S Private School, 30; Miss VAUGHN'S Private School, 26; Mrs. SLAYBACK'S school for small children, 26; making a total in all the schools of 399.

Arcana Hall is a spacious building, owned by the Odd Fellow and Masonic Fraternities. It is three stories high; the first story is occupied as store rooms. On the second floor is a superb Hall, used for exhibitions of various kinds, for lectures, parties, &c. It is the only place of amusement in the city.

There are fourteen Dry Goods Stores—all of which appear to be doing a good business.

Wholesale Groceries and Boat Stores	4	Livery Stables	3
Family Groceries	8	Printing Offices	2
Drug Stores	4	Marble Factory	1
Hotels	3	Saddlers' Shops	4
Jewellers' Stores	3	House and Sign Painters	2
Queensware, China & Glassware Store	1	House Painters	3
Book Stores	2	Stone Masons	2
Iron and Hardware Store	1	Boot and Shoe Shops	4
Boot and Shoe Stores	2	Brewery	1
Clothing Stores	2	Plasterers	4
Tin and Stove Stores	2	Barbers' Shops	3
Furniture Stores	2	Candle and Soap Factories	2
Confectionery	1	Carpenter's Shops	10
Milliners' Stores	3	Cooper Shops	4
Tailors and Drapers	4	Blacksmith Shops	8
Mantua Makers	2	Licensed Wagons and Drays	41
Tobacco and Cigar Stores	2	Coal Banks, now worked, in city limits	15
Lumber Yards	3		

The amount of Imports for the year 1854, is $683,504 00, to wit:

Dry Goods, &c., in 14 Stores	$341,556
Boat Stores & Wholesale Groceries	76,337
Family Groceries	31,400
Queensware	20,000
Clothing	35,000
Drugs, Medicines, Oils, &c	26,500
Books, Stationery, &c.	10,000
Tin, Sheet Iron, Copper, Stoves	18,500
Pig Iron	1,000
Boots, Shoes, Hats and Caps	12,000
Hardware, Iron and Cutlery	12,500
Watches, Clocks, Silverware, &c	14,900
Furniture and Furniture Stock	12,000
Saddlery and Harness Stock	13,000
Millinery	7,500
Carriages & Carriage Materials	23,800
Tobacco and Cigars	7,500
Hydraulic Lime	800
Barley, Malt and Hops	2,000
Marble	2,500
Confec ioneries	4,500
Lumber and Shingles	36,911
Total	$683,504

During the same period, the Exports have amounted to $1,041,237 49, to-wit:

20,799 coils Bale Rope, val.	$263,620 00
3,592 bales dressed Hemp	143,680 00
3,105 bales undressed Hemp	62,100 00
365 bales Hemp Tow	5,840 00
10,000 yards Bagging	1,400 00
283 coils Binding	3,396 00
1,365 casks of Bacon	76,440 00
915 pieces of Bacon	1,098 00
1,316 barrels Lard	29,610 00
8,092 sacks Wheat	23,195 34
19,051 sacks Flour	71,441 25
1,160 barrels Flour	8,700 00
3,500 bushels Bran	417 00
12,830 sacks Corn	16,037 00
200 sacks Cornmeal	250 00
1,511 Dry Hides	2,719 80
1,107 sacks Dried Fruit	2,767 00
96 bales Wool	1,746 00
820 barrels Whisky	11,480 00
67,600 bushels Coal	6,760 00
1,471 packages Merchandise	14,700 00
2,675 head Cattle	106,750 00
95 Mules and Horses	8,000 00
144 Wagons	28,800 00
1,167 Hogs	9,276 00
2 Carriages	900 00
102 sacks Flaxseed	255 00
102 pieces Marble	3,060 00
673 sacks Barley	1,009 00
173 bushels Hempseed	422 00
39 sacks Beeswax	702 00
96 sacks Feathers	1,536 00
75 bundles Peltries	562 00
20 sacks Grass Seed	100 09
6 barrels Tallow	144 00
74 empty Casks	74 00
1 firkin Honey	10 00
2 firkins Butter	20 00
4 sacks Mustard	20 00
7 hogsheads Tobacco	525 00
2 Threshing Machines	212 00
57 sacks Beans	161 00
15 rolls Leather	100 00
6 sacks Pecans	42 00
Stoves and Castings	1,000 00
Gold Coin	20,000 00
Hair and Bristles	150 00
There were during the summer transported in wagons, across the Plains to Mexico goods to the amount of	120,000 00
Total	$1,041,237 49

There are in the city a Branch of the Bank of Missouri, and two private Banking Houses, one Insurance Office and three Agencies for foreign Companies. Amount of property insured, about $3,000,000. Amount of premiums received, about $10,000.

There are in full operation in the city, three extensive Hemp Factories, giving constant employment to about 160 hands. Two of these Factories are worked by steam, and one by horse power. The aggregate amount of hemp manufactured and hackled for the eastern market, at these Factories, is 2,626 tons.

Two Steam Flouring Mills have ground since January last, 134,000 bushels of wheat, and 26,000 bushels of corn. Three Steam Saw-Mills have cut 1,248,000 feet of lumber.

Six hundred Plows were manufactured in the city during the present year.

The number of bricks made at four yards is 1,040,000. Owing to the sickness in the early part of the season, and the high price

of labor during the whole summer and fall, the number of bricks is comparatively small.

New Buildings.—Two large fire-proof Clerk's Offices, erected by the County Court; one large building for a Public School, erected by the Lexington School District; one Warehouse, on the Levee, fifty feet front and one hundred deep, three stories high, by M. B. Mathews; one Warehouse, fifty feet front and one hundred deep, four stories high, by Messrs. McGrew Brothers, not yet completed; buildings for Iron Foundry, by Morrison & Wright; one Hotel by J. C. Rountree; five dwellings.

The Iron Foundry, which has been in blast about two months, will, during the coming year, require more than 200 tons of metal, and with its present capacities can manufacture 3,000 stoves per year, and is now prepared for executing all orders for every variety of castings and machinery.

To be erected in 1855.—One Paper Mill; one Factory for carding, spinning, weaving, dressing and coloring of woolen goods, and one steam rope factory, are to be erected in 1855.

Professions.—Clergymen, 7; Lawyers, 17; Physicians, 13; Dentists, 3; Daguerreotypists, 2.

Civil suits instituted in the Circuit Court—including eight applications for divorce—one hundred and seventy-eight. The number of indictments found since January last, is thirty-eight. Of these, eight were for felonies, and thirty for misdemeanors.

CITY REVENUE FOR 1854.

Tax on Real Estate	$2,316 37	Tax on Dogs	80,00
Tax on Personal Property	1,485 95	Total Revenue	$12,471 47
Tax on Money, Notes & Bank Stock	2,636 00	Valuation of Real Estate, lying within the City limits	$663,275 00
Wharfage	1,000 00	Personal Estate	297,191 00
License	3,500 00	Money, Notes & Bank Stock	527,230 00
Poll Tax	413 00	Total valuation	$1,487,696 00

The nnmber of Steam Boat arrivals at our port since the 1st of January, 1854, is 392.

From May 4, 1854, to December 24, 1854, the register of the City Hotel shows the arrival of about 5,500 strangers. This only embraces those who stopped over night.

DEPARTMENT OF INTERNAL IMPROVEMENTS.

The Railways of the United States, January 1st, 1855.

The "American Railway Journal" and the "American Railway Times" have each published a list of the Railways in the United States at the commencement of the present year; but from the discrepances which appear in their statements and from certain errors discovered in the description of works with which we happen to be acquainted, we conclude that neither of the lists are strictly correct. Indeed, when we take into view the great number of roads which have been in progress of construction for some years past throughout the United States, it is obvious that correct information touching the number of miles completed, and the cost of building, could not be easily obtained.

The following list of roads is copied, with slight alterations, from the "Railroad Journal;" the summary showing the number of miles in each State, cost, &c., is from the "Railway Times." According to the Journal the aggregate number of miles completed in the United States, on 1st January, 1854, was 19,438, and according to the Times, 21,310 miles. We incline to the opinion that in this respect the estimates of the Journal approximates more nearly the true amount.

From the American Railway Times.

The number of miles of railway in operation upon the surface of the globe is 40,070; of which 16,964 miles are in the Eastern, and 23,106 in the Western hemisphere; and which are distributed as follows: In Great Britain, 7,774 miles; in Germany, 5,340 miles; in France, 2,569 miles; in Belgium, 873 miles; in Russia, 422 miles; in Sweden, 75 miles; in Norway, 42 miles; in Italy, 170 miles; in Spain, 60 miles; in Africa, 25 miles; in India, 100 miles; in the United States, 21,310 miles; in the British Provinces, 1,327 miles; in the Island of Cuba, 359 miles; in Panama, 50 miles, and South America, 60 miles. The longest railway in the world is the Illinois Central, which with its branches is 731 miles in length, and constructed at a cost of $15,000,000. The number of miles of railway in the United States exceeds the rest of the world, by the number of 2,550 miles. The number of railways completed in the United States is 274; the number partially completed is 63; and the number in course of construction is 107; the number of miles in operation is 21,310; which have been completed at a cost of $621,316,103. The number of miles in course of construction is 16,975. The State of Massachusetts has one mile

of railway to each seven square miles of its geographical surface; Essex county, in that State, with a geographical surface of 400 square miles, has 159 miles of railway facility, which is a ratio of one mile of railway to each three square miles of its geographical surface.

Tabular Statement showing the number of miles of railroad in operation in the United States, January, 1855.

From the American Railroad Journal.

Roads.	Miles in operation.
MAINE.	
Androscoggin & Kennebec	55
Atlantic and St. Lawrence	150
Buckfield Branch	13
Bangor and Piscataquis	12
Kennebec and Portland	61
Bath branch	5
Portland, Saco & Portsmouth	61½
Calais and Baring	11½
Machias port	8
York and Cumberland	18
Androscoggin	20
Penobscot and Kennebec	40
Kennebec and Somerset	10
Total	459
NEW HAMPSHIRE.	
Boston, Concord & Montreal	92¼
Cocheco	28½
Concord	35
Contocook Valley	14½
Great Falls and Conway	13
Manchester and Lawrence	24
Northern	82
Portsmouth and Concord	47
Sullivan	25
Wilton	15
Cheshire	54
Ashuelot	23
Eastern	16¾
White Mountain	20
Boston and Maine	39¾
Merrimac & Connectic. Rivers	55¼
Total	585
VERMONT.	
Connec. & Passumpsic Rivers	61
Rutland and Burlington	119
Vermont Central	166
Rutland and Washington	12
Vermont Valley	24
Bennington branch	6
Western Vermont,	53
Whitehall and Rutland	13
Total	454
RHODE ISLAND.	
Stonington	50
Providence, Hartf. & Fishkill	32
Providence and Bristol	13
Total	95
MASSACHUSETTS.	
Berkshire	21
Boston and Lowell	28
Boston and Maine	44
Boston and Providence	53½
Stoughton branch	4
Boston and Worcester	68½
Cape Cod branch	46
Dorchester and Milton	3
Eastern	58
Essex (Salem to Lawrence)	21
Fitchburg	68
Fitchburg and Worcester	13
Lowell and Lawrence	12¼
Nashua and Lowell	15
New Bedford and Taunton	21
Newburyport	14½
Old Colony and Fall River	87
Petersboro and Shirley	23
Pittsfield and N. Adams	19
Providence and Worcester	43½
South Shore	11½

Roads.	Miles in operation.
Stony Brook	13
Western (Boston to Albany)	117
Worcester and Nashua	46
Vermont and Massachusetts	77
Housatonic branch	11
South Reading branch	9
Salem and Lowell	17
Georgetown	14
Grand Junction	6½
Harvard branch	1
Lexington & W. Cambridge	7
Taunton branch	11
Boston & N. York Central	74½
Fairhaven branch	15
Medway branch	3½
Saugus branch	8½
South Reading branch	8
West Stockbridge	3
Connecticut River	52
Charles River branch	9
Stockbridge and Pittsfield	22
Palmer and Amherst	20
Total	1,220
CONNECTICUT.	
Hartford and New Haven	62
Hartford, Prov. & Fishkill	76
Housatonic	98
Middletown branch	11
Faugatuck	62
New Haven Canal	65
N. London, Willim. & Palmer	66
New London and N. Haven	50
Norwich and Worcester	66
New York and New Haven	76
Danbury and Norwalk	24
Total	656
NEW YORK.	
Albany & West Stockbridge	38¼
Buffalo and Niagara Falls	28
Cayuga and Susquehanna	35
Hudson and Berkshire	31½
Hudson River	150
Long Island	100
New York and Erie	464
New York and Harlem	130
Northern	118
New York Central	562½
New York City roads	25
Brooklin City	20
Watertown and Pottsdam	13
Flushing	7
Oswego and Syracuse	35
Renssalear and Saratoga	32
Saratoga and Washington	53
Saratoga and Schenectady	22
Skaneateles and Jordan	5
Corning and Blossburg	15
Watertown and Rome	96
Albany and Northern	32
Buffalo and State line	69
Buffalo and New York city	91
Buffalo, Corning & N. York	100
Canandaigua and Elmira	69
Plattsburg and Montreal	21
Rutland and Washington	51
Sackett's Harbor & Ellisburg	18
Troy and Boston	38
Canadaigua & Niag. Falls	99
Syracuse and Binghamton	80
Genesee Walley	20
Utica and Black River	16
Total	2,685
NEW JERSEY.	
Belvidere and Delaware	50
Burlington & Mount Holly	6
Camden and Amboy	98
Morris and Essex	63
New Jersey	31
New Jersey Central	64
Trenton branch	6
Union	33
Flemington branch	12
Camden and Atlantic	60
Millstone branch	6
Total	429
PENNSYLVANIA.	
Alleghany Portage	36
Beaver Meadow	36

Carbondale and Honesdale	24
Columbia and Philadelphia	82
Westchester Branch	9
Corning and Blossburg	25
Cumberland Valley	52
Little Schuylkill	28
Mine Hill	12
Pennsylvania	256
Phila., Reading & Pottsville	92
Phila. and Norristown	17
Germantown branch	6
Phila. and Trenton	30
Phila., Wilmingt. & Baltim.	98
Summit Hill & MauchChunk	8
Williamsport and Elmira	78
Franklin	22
Dauphin and Susquehanna	59
Chester Valley	22
York and Cumberland	25
Sunbury and Erie	27
Delaware, Lakaw. & Western	50
Catawissa	62
Phila. and Westchester	26
Pennsylvania Coal Company	47
Columbia branch	18
Hanover branch	13
York and Wrightsville	13
Lancaster and Harrisburg	37
Franklin Canal	26
Northeast	19
Indiana branch	16
Various Coal Roads	150
Pittsburgh & Steubenville	35
Philadelphia and Sunbury	25
Total	1,581
VIRGINIA.	
Richmond and Danville	95
Richmond and Petersburg	22
Clover Hill	11½
South Side	110
Manasses Gap	61
Petersburg and Roanoke	60
Seabord and Roanoke	95
Appomattox	10
Winchester and Potomac	32
Virg. Cent., incl. BlueRidge	138
Virginia and Tennessee	136
Orange and Alexandria	97
Richm., Fred'b'g & Potomac	76
Greenville and Roanoke	21
Roanoke Valley	22
Total	986½
DELAWARE.	
New Castle and Frenchtown	16
Wilmington branch	6
Total	22
MARYLAND.	
Annapolis and Elkridge	21
Baltimore and Ohio	379
Washington branch	38
Frederick branch	3
Baltimore and Susquehanna	57
Westminster branch	9
Total	507
NORTH CAROLINA.	
Gaston and Raleigh	87
Wilmington and Weldon	162
North Carolina Central	75
Weldon and Ridgeway	25
Total	349
SOUTH CAROLINA.	
South Carolina	242
Greenville and Columbia	165
Charlotte & S. Carolina	109
King's Mountain	22
Laurens	32
Wilmington & Manchester	171
Total	741
GEORGIA.	
Central	191
Georgia	173
Macon and Western	101
Western and Atlantic	140
South Western	72
Rome branch	20
Muscogee	50
Atlanta and West Point	81
Milledgeville	17
Eatonton and Milledgeville	21
Wilkes County	18

Athens branch	40
Waynesboro	51
Total	975
ALABAMA.	
Montgomery & West Point	88
Mobile and Ohio	62
Alabama and Charleston	56*
Tuscumbia,Courtl.&Decatur	43
Girard	25
Opelieka	30
Total	304
MISSISSIPPI.	
Raymond	7
St. Francis and Woodville	28
Vicksburg and Brandon	60
Mobile and Ohio	100
Canton and Jackson	25
Total	220
LOUISIANA.	
Carrolton	6
Clinton and Port Hudson	24
Lake Pontchartrain	6
Mexican Gulf	27
N.Orleans,Jackson&North.	85
N. Orleans & Opelousas	50
Total	198
TEXAS.	
Buff.Bay,Brazos&Colorado	32
KENTUCKY.	
Covington and Lexington	93
Lexington and Frankfort	29
Louisville and Frankfort	65
Maysville and Lexington	19
Louisville and Nashville	25
Total	231
TENNESSEE.	
East Tennessee & Georgia	80
Memphis and Charleston	63
Nashville and Chattanooga	158
McMinnville branch	25
Total	326
OHIO.	
Bellefontaine and Indiana	123
Central Ohio	141
Cincinnati,Hamilt.&Dayton	60
Cleveland,Columb.&Cinc.	135
Cinc.,Wilmingt.&Zanesv.	90
Clevel.,Painesv.&Ashta	72
Clevel., Zanesv. & Cinc.	61
Cleveland and Pittsburgh	133
Clevel.&Toledo, S. Division	87
" " N. Divis.	60
Columbus and Xenia	55
Columb.,Piqua & Indiana	90
Dayton and Michigan	28
Dayton and Western	42
Findlay branch	16
Greenville and Miami	47
Hamilton,Eaton&Richmond	45
Carrolton branch	20
Iron	13
Little Miami	84
Mad River and Lake Erie	193
Mansfield and Sandusky	56
Newark and Mansfield	61
Ohio and Pennsylvania	187
Ohio and Mississippi	20
Ohio and Indiana	131
Scioto and Hocking Valley	44
Dayton and Xenia	19
Marietta and Cincinnati	94
Steubenville and Indiana	116
Springf.,Mt.Vern. & Pittsb.	50
Springfield and London	20
Toledo and Indiana	50
Total	2,453
INDIANA.	
Columbus and Shelbyville	24
Evansville & Crawfordsville	109
Indiana Central	72
Indianapolis&Bellefontaine	84
Jeffersonville	77
Lafayette and Indianapolis	64
Madison and Indianapolis	86
Martinsville	27
New Albany and Salem	288
Newcastle and Richmond	40
Peru and Indianapolis	73
Shelbyville and Knightstown	27
Shelbyville Lateral	16
Shelbyville and Rushville	20

* Believed to be a mistake.—Ed. W.J.

Terre Haute and Richmond	73
Northern Indiana	129
Ohio and Mississippi	67
Michigan Central	40
Indianapolis and Cincinnati	90
Total	1,406
MICHIGAN.	
Central	228
Southern	133
Pontiac	25
Tecumseh Branch	10
Erie and Kalamazoo	33
Total	429
ILLINOIS.	
Aurora Branch	13
Aurora Extension	46
Chicago and Mississippi	220
" and Rock Island	132
" and Milwaukee	45
Galena and Chicago Union	220
Great Western Illinois	94
Illinois Central	630
St. Charles Branch	7
Illinois and Wisconsin	30
Terre Haute and Alton	90
Peoria and Oquawka	45
Bureau Valley	47
Ohio and Mississippi	75
Michigan Central	10
Michigan Southern	12
Central Mil. Tract	84
Belleville and Illinoistown	14
Total	1,864
MISSOURI—Pacific	37
WISCONSIN.	
Milwaukee & Mississippi	104
Watertown Branch	30
Milwaukee and Chicago	40
Beloit and Madison	16
Milwaukee and La Crosse	30
Rock River Valley	20
Total	240

SUMMARY from the Railway Times.

States.	Number of Railways.	Number of Miles in operation.	Number of Miles in course of construction	Cost.
Maine	12	477	35	$13,749,021
New Hampshire	16	512	34	15,860,940
Vermont	7	419	59	17,998,835
Massachusetts	39	1293	36	59,167,781
Rhode Island	1	50	.....	2,614,484
Connecticut	12	638	51	25,224,191
New York	32	2625	801	111,882,503
New Jersey	11	437	.....	13,840,030
Pennsylvania	69	1992	1406	94,657,675
Delaware	2	16	43	600,000
Maryland	2	512	30	2,654,338
Virginia	23	837	1095	16,466,250
North Carolina	5	381	243	6,847,213
South Carolina	10	700	374	13,547,093
Georgia	16	930	452	17,084,872
Florida	2	54	.....	250,000
Alabama	6	221	659	3,986,208
Mississippi	7	239	755	4,520,000
Louisiana	8	169	293	1,731,000
Texas	1	....	72	.....
Tennessee	12	517	946	10,436,610
Kentucky	10	228	572	6,179,072
Ohio	47	2927	1681	67,798,201
Indiana	39	1453	2608	29,585,933
Illinois	31	2667	1556	55,663,656
Michigan	5	601	333	22,370,397
Missouri	6	37	963	
Iowa	4	115	1315	2,300,000
Wisconsin	11	283	746	5,600,000
Total	444	21,310	16975	$621,316,303

Railroad Meeting at Cleveland:—Tariff of Charges on Railroads.

At a meeting of the Representatives of about thirty Railroad Companies convened at Cleveland, Ohio, on the 28th day of November, 1854, the following resolutions and rates of charges were adopted:

Resolved, "That the following prices be affixed to the separate classifications to or from New York or Boston, by either of the Great East and West Lines. The New York and Erie and its connections, or the Worcester and Western in Massachusetts, and N. York Central from New York and Boston to the following places, on the three classes for Eastward or Westward bound freight, viz:

New York or Boston, to	1st Class.	2d Class.	3d Class.
Dunkirk	97	72	59
Buffalo	97	72	58
Suspension Bridge	97	72	58
Chicago	2 00	1 50	1 20
Cincinnati	1 57	1 20	1 00
Indianapolis	1 62	1 20	1 06
Lafayette	1 82	1 43	1 21
Terre Haute	1 87	1 45	1 21
Louisv., via Indianap.	1 82	1 40	1 21

Provided, That the prices from New York and Boston to Cleveland, and vice versa, on freight to and from Indianapolis, be the same as on freight to and from Cincinnati.

Classification—Westward.

FIRST CLASS.

Fresh Beef, Pork, Mutton, Venison and Veal,
Apples, green, prepared,
Apples, dried,
Baskets, twice 1st class rates,
Batting, Blinds, Bonnets, Books
Boots and Shoes, Bread,
Brushes and Brooms, Bacon loose
Buffalo Robes,
Cabinet Ware, boxed at once and half first class rates,
Candles, Cards,
Copper and Brass vessels,
Cotton Waste, in sacks or bales, Carpeting,
Carriages, well boxed, owner's risk, once and a half first class rates,
Clocks and Weights, boxed,
Chairs, well packed, owner's risk of chafing, at twice 1st class rates,
Cork, Cigars boxed,
Covers and Sieves, Cocoa, Chocolate,
China Ware, Cutlery, Caps, Cassia
Cinnamon, Candles,
Dry Goods, in boxes, bales and trunks,
Drugs, in boxes and bales,
Demijohns, at owner's risk,
Feathers and Furs,
Furniture, same as cabinet ware boxed,
Fruit, Figs, Fish fresh, prepared
Garden Seeds, Glass Ware,

Glue, Ginger, Grapes,
Glass, window, over 12 by 20, owner's risk,
Hair, in sacks, Hams, loose,
Hats and Caps, Honey,
Iron Castings, light,
Indigo, Ink, Leather, loose,
Looking Glasses, owner's risk, twice first class rates,
Lemons, sacked,
Measures and Tubs, Moss in sacks
Marble, wrought, owner's risk,
Machinery, boxed, small,
Mats and Rugs, Muskets,
Medicines, Musical Instruments,
Nuts,
Oysters, in kegs and cans,
Oranges, sacked,
Pepper, Paper Hangings, bundles,
Peaches, prepaid, Pine Apples,
Pianofortes, owner's risk, boxed,
Palm Leaves, Peltries,
Plows and Cultivators,
Porter and Ale, in glass,
Quinces,
Rattan, Raisins, Rockers,
Stationery, not boxed,
Scales and Scale Beams,
Scythe Snaths, Soap, fancy,
Sleighs, well boxed, once and a half
Stoves, at owner's risk, Saddlery, Spices,
Sweet Potatoes, Sizing, Stove Pipe
Stove Plate, owner's risk, Starch,
Tin Ware, Trunks, Tea,
Trees and Shrubbery, imported,
Trees and Shrubbery, domestic, once and a half 1st class rates,
Toys, once & a half 1st class rates,
Twine,
Umbrellas,
Veneering,
Wagons, children's, boxed, same as cabinet ware,
Waggons and Hobby-horses, unboxed, twice first class rates,
Waste, in sacks or bales,
Wines, in boxes or baskets, Whips
Wadding, Water, mineral, Wax,
Wheelbarrows, Wrapping Paper, Whalebone,
Wool, in sacks, Wooden Ware,

SECOND CLASS.

Axes,
Bagging, Bottles, Brimstone,
Binders Board, Burlaps, and Duck
Broom Corn, pressed, Berries, Bells,
Chair Stuff, Copper Plates and Sheets,
Copper Bolts, Pigs and Wire,
Copper Rods and Nails,
Crockery, boxes and barrels,
Cotton, round and squure bales, Chain,
Clover and Grass Seed,
Domestic Sheetings, Shirtings and Duck, in original bales,
Dye Wood, in bags and barrels,
Deer Skins, pressed,
Earthen and Stone Ware, Flax Seed,
Flax, boxed, Forks, hay and manure,
Glass, window, under 12 by 20,
Grass and Clover Seed,
Gum Copal,
Hides, Hoes, Hoofs and Horns,
Hemp, boxed, Hardware,
Iron, hoop, band and sheet, Iron safes,
Indigo, in original boxes,
Lead, in pipe, bars, pig and sheet,
Liquor in wood,
Leather, in rolls and boxes,
Loaf Sugar,
Moss, pressed,
Mahogany, in boards and planks,
Oakum, Oil, Oil Cloth,
Oysters and Clams, in shell,
Palm Leaf, pressed, Paper Hangings, in boxes,
Paste Board,
Pickles and Cucumbers, in casks,
Paints, dry or in oil,
Rice, Rope, Rags in sacks,
Raisins, fifty boxes,
Steel in bars, Scythes, Shovels and Spades,
Soap, common, Saleratus,
Sheep and other Skins, in bales,
Spelter and Zinc, Shot, in bags,
Sumac, Sugar, in bags,

Scale and Scale Beams, boxed,
Tobacco, in bales and boxes,
Tow, boxed, Tea, twenty boxes,
Tallow, Type,
Wood, in shape, Wire,
Wool, pressed in bales,
Yarn, pressed,

THIRD CLASS.

Anvils, Anchors,
Ale, in wood,
Beer in wood, Barilla, Burrblocks,
Bones, Bleaching Salts,
Cider, Crockery, orates & hogsh's,
Coffee,
Cement, Clay, Coal,
Cotton, square, 50 bales,
Chain Cables, Chalk,
Copper, in boxes,
Dye Wood, in stick,
Fish, salted and pickled,
Grain, in casks and bags,
Gum Shellac,
Hoofs and Horns,
Hides, pressed, in bales,
Iron Safes, five in number,
Iron, bar, bloom, bolt, pig & boiler
Iron Nuts and Rivets,
Junk,
Lead in casks, Lime, Lath, Lumber
Licorice, in case,
Marble and Stone, unwrought,
Molasses, Manilla, three tons Mill Stones,
Mahogany Logs,
Nails and Spikes, Nail Rods,
Oil, in hogsheads,
Plaster, Pitch,
Rigging, Rosin,
Rags, pressed, Rice, in tierces,
Steel, in boxes and bundles,
Sugar, in barrels and in boxes,
Sugar in hogsheads, Shot in kegs, Salt,
Spelter and Zinc, in casks, Soda Ash,
Tobacco in hogsheads, Tar, Tin,
Vinegar,
Whiting in casks,

Eastward.

FIRST CLASS.

Fresh Beef, Pork, Mutton, Venison,
Baskets, once and a half first class rates,
Batting, Blinds, Books,
Brushes and Brooms, Bott'os,
Cabinet Ware, boxed, once and a half first class rates,
Cotton Waste, in sacks or bales,
Carriages, well boxed, once and a half first class rates,
Chairs, well boxed, owner's risk of chafing, twice first class rates,
Candies, Cigars, boxed, Candles,
Cheese, loose, Covers and Sieves,
Dry Goods, in boxes, bales and trunks,
Demijohns, at owner's risk,
Feathers and Furs,
Fowls, in crates, once and a half first class rates,
Fish, fresh, prepaid,
Furniture, same as Cabinet Ware,
Garden Seeds, Glass Ware,
Glass, window, over 12 by 20,
Game, dressed, Glue,
Honey, Hair, in sacks,
Iron Castings, light,
Leather, loose,
Looking Glasses, owner's risk, twice first class rates,
Marble, wrought, owner's risk,
Machinery, boxed, Medicines, owner's risk,
Musical Instruments,
Peaches; prepaid, Paper, not boxed, Peltries,
Pianofortes, boxed, Plows & Cultivators,
Porter and Ale, in glass. Poultry, dressed,
Rockers,
Scales and Scale Beams, Scythe Snaths,
Soap, fancy, Sashes,
Sleighs, well boxed, once and a half first class rates,
Stoves and Stove Plates, at owner's risk,

Saddlery, Sizing, Stove Pipe,
Sheep and Deer Skins,
Tin Ware, boxed, Trunks,
Trees and Shrubbery, at owner's risk, once and a half first class rates,
Twine,
Veneering,
Wagons, children's, same as Cabinet ware,
Waste, Wading, Water, mineral,
Wheelbarrows, Wool, in sacks,
Wine, in boxes,
Wooden Ware and Covers, Wrapping Paper.

SECOND CLASS.

(In Quantities of less than 1000 Pounds, to be charged First Class.)

Apples, green and dried,
Buffalo Robes, Beeswax, broom corn, pressed,
Bells, Blinder's Boards, Butter, Beans,
Bare Rope,
Carpeting, Chair Stuff, Cheese,
Clover and Grass Seed,
Domestic Goods,
Deer and other Skins, in bales,
Earthen and Stone Ware,
Eggs, in barrels, owner's risk,
Flax Seed, Flax, boxed,
Glass, window, under 12 by 20 Ginseng,
Hides, Hoes, Ham and Bacon, loose,
Hemp Yarn, Hemp. boxed, Hops,
Iron Castings, heavy, Iron Safes,
Leather, in rolls and boxes,
Measures and Tubs, in nests,
Nuts,
Oil Cloth, Oil Cake,
Paper in boxes, Paints, Dry and in Oil,
Pickles and Cucumbers, casks,
Potatoes, Peas,
Quinces,
Rope, Rags, in sacks,
Straw Paper, Scythes, Sugar, maple,
Soap, common, Saleratus,
Straw Boards, Starch,
Tallow, Tobacco, in bales, Tow, boxed,
Tea, Tin and Type,
Wine, in casks, Wool,
Wood in shape,
Yarn, pressed.

THIRD CLASS.

(In Quantities of less than 1000 lbs., to be charged Second Class.)

Axes, Ashes, pot and pearl,
Alcohol, in casks, Ale, in barrels,
Butts and Hinges, Beer, in barrels,
Burr Blocks, Bleaching Salts, Bones,
Beef, salted, in barrels,
Cider, Copper, pig and ore, Coal, Chain Cables,
Cotton, in square bales, Cement,
Fish, salted and pickled,
Grind Stones, Grain in casks and bags,
Hams, in hhds, or casks, Hoop, hoop poles,
Hogs Hair, Hoofs and Horns,
Iron, bar, broom, bolt, pig and boiler,
Iron Castings, large and plain,
Junk,
Lath, Lead, pig, Lime, Lumber,
Lard, in barrels, tierces or kegs,
Marble and Stone, unwrought, Mill Stones,
Nails and Spikes,
Oil,
Pork, salted, barrels, Plaster,
Sand, Shooks, Spokes, Staves and Heading,
Salt, in barrels and bags,
Tobacco, in hogsheads,
Vinegar, Whisky.

SPECIAL.

The undermentioned articles, when shipped in considerable quantities at one time, may be taken by either of the parties at such rates, over their respective routes, as they may from time to time determine, viz :

Anchors,
Ashes, pot and pearl,
Bleaching Salts, Burr Blocks,
Brimstone,
Beans, Beef, salted, in casks, Bale Rope,
Crockery, in crates and hogsheads, Chalk,
Coffee, Chain Cable, Clay,
Cotton, square bales,
Copper, pig or ore, Cotton, Candles,
Fish, salted, in casks,
Flour and Meal, in bags and bbls,
Gum Shellac,
Grain : Corn, Oats, Barley, Wheat and Rye, in bags, casks or bulk, Grind Stones,
Hams and Shoulders, in casks, Hemp,
Hides and Skins, green,
Iron, bar, pig and railroad,
Iron Castings,
Iron, nuts and rivets, 8 tons,
Liquor, in wood,
Lard, in bbls. and tierces,
Molasses,
Marble and Stone, unwrought,
Mahogany Logs, Mill Stones,
Nails and Spikes, Nail Rods,
Oil and Oil Cake, in casks,
Pig Iron,
Paints, dry or in oil, Pitch,
Provisions, salted,
Potatoes, peas, Pig Lead, Pork, salt, in casks,
Rosin, Rigging, Rice, Rags,
Sumac, in hdds, barrels and boxes,
Steel, in bars,
Salt,
Saltpetre, crude,
Tar,
Tobaco, in hhds., Tallow,
Whiting, White Lead, Wool, pressed,
Yarn, pressed,
Whisky, Window Glass.

Resolved, That each company represented in this Convention, shall be at liberty to determine their own local fare ; Provided, that the way fares collectively between any two points shall not be less than the price of a through ticket, as agreed upon by the Convention.

Resolved, That the fare for first class passengers be twenty-two dollars, and the fare for Emigrant passengers be eleven dollars between New-York and Chicago.

Resolved that the rates of fare on first class passengers by either of the four lines, New-York Central, New-York and Erie, Pennsylvania, and Baltimore and Ohio, shall be as follows :

NEW-YORK TO

Sandusky	$14 65	Bellefontaine	$16 50
Cleveland	13 00	Dayton, via Xenia	18 00
Detroit	15 00	Dayton, via Galion and Bellefontaine	18 00
Chicago	22 00	Dayton, via Sandusky	18 00
Indianapolis	20 00	Toledo	16 00
Cincinnati	18 50	Louisville, U. S. Mail Line	20 50
Columbus	16 40	Louisville, Ohio and Miss.	21 00
Shelby	14 75	Louisville and Indianapolis	21 00
Xenia	17 70		

From the Alton Telegraph, Dec. 15, 1854.

Terre Haute & Alton Railroad—Progress of the Work.

The division of the Terre Haute and Alton Railroad from this city to Litchfield, a distance of about forty miles, is now in the hands of the Company, and is formally opened for the accommodation of the public. Regular trains for passengers and freight will commence running on the road on this day. They will, we understand, for the present leave the foot of Henry street at 10 o'clock A. M., upon the arrival of the boat from St. Louis, and reach Litchfield at noon, connecting there with hacks to Hillsboro. Returning, they will leave Litchfield, at 3 o'clock P. M., and arrive here about 5 o'clock, in time for the evening train for Chicago, or the night boat to St. Louis. Due notice of the running of the trains will, however, be officially published in a day or two.

In regard to the other portions of the road, we have received from Capt. BARNES, several items of information, which will be interesting to our readers. He states that it is the intention of the Company to push the work on to completion just as rapidly as money and labor will accomplish it. Large forces are now at work at all the principal points on the line; and these will be increased whenever additional men can be employed to advantage. The track-layers have now reached a point about four miles East of Litchfield, and the embankment in the bottom of Shoal creek is nearly ready for the superstructure. It will be but a short time before the road will be opened to Hillsboro, the gap to be filled now being only about eleven miles.

From Hillsboro to the junction of the Illinois Central road, the distance is about twenty-eight miles, twenty of which are now ready for the rails. It is the intention of the Company to ship the iron from Chicago by the Central road to the junction, and to lay it towards Hillsboro. That portion of the road will be laid with iron by the first of February.

Upon the Eastern end of the road, the work is also progressing with commendable activity.—The track from Terre Haute westward, is laid to Grandview, a distance of thirty miles, and regular trains, twice a day, are now running upon it. The distance from Grandview to the junction of the Chicago Branch of the Illinois Central is about thirty miles; and at the rate at which the work is now going forward, it will be reached early in March. The rails for this section will also be received from Chicago by the Central road.

The remaining part of the road embraced between the two branches of the Central road, is not in so forward a state as the other portions we have mentioned. It is intended, however, that the work shall progress towards Shelbyville from both ends simultaneously, and that the track shall be laid through by June, ex-

cepting about seven miles of heavy work in the Kaskaskia river bottom. It is expected that the entire road from Alton to Terre Haute will be complete and ready for the cars by the first of next July ; on which occasion a glorious excursion may be anticipated.

The completion of the Terre Haute and Alton road will mark a new era in the history and progress of Middle Illinois. Forming as it will the shortest and most direct *route* to the cities of the Eastern seaboard, it must necessarily command a very large proportion of the travel and traffic of this part of the country. The through business of the road, however, will not compare with the local traffic, which it will create and sustain. Every mile which the road traverses is capable of a high cultivation, and will produce in the items of wheat, corn, and other products, such a business as we now little dream of. Its completion will likewise open up wide farms, bring in population to the fertile prairies, and give renewed impetus to the advancement of the country through which it runs. It will be the commencement and the herald of a new epoch ; and the long trains, as they vibrate like pendulums across the State, will hasten the coming of the time when Illinois shall rank in the scale of intelligence, wealth and resources, with the first of her sister States.

ST. LOUIS MANUFACTURES.

Manufacture of Nails and Spikes.

Among the many industrial enterprises which have been undertaken in St. Louis within the last year, none are better calculated to promote the public interest or to establish the reputation of our city as a manufacturing point, than the Nail and Spike Factory now in process of erection by Messrs. Stewart, Parks & Co. on Seventh street, in Allen's Addition. We are informed that this company propose to produce nails and spikes from the raw pig metal, but we have no information in respect to the particular process, nor do we certainly know that this is a new feature in the economy of nail making. But when we take into view the fact that the coal of this vicinity is regarded quite suitable for all the purposes of the establishment, it appears obvious, all other circumstances considered, that no other point in the Union offers greater inducements to such an enterprise.

We are informed that when the works are in full operation, they will consume about eighty tons of pig iron, and 5,000 bushels of coal, and produce sixteen hundred kegs of nails weekly. It is estimated that the works will employ about one hundred and thirty hands, besides coopers, teamsters, &c.

The works are being constructed on quite an extensive plan, occupying an area of three hundred and four by one hundred and three feet.

Should the proprietors of these works establish the fact that St. Louis coal can be used with economy, and produce a good article of iron from the raw pig, they should be regarded as benefactors of the city and to the community at large. This fact established, St. Louis possesses all the conditions required to make it the greatest producer of iron fabrics perhaps upon the globe, and we shall expect to see this branch of industry developed with a degree of energy and rapidity commensurate with its ultimate magnitude.

From the Missouri Republican.

The St. Louis Oil Manufacturing Company.

This Company was formed on the 21st day of February, 1854, under the provisions of an act of the State of Missouri, entitled "An act to authorize the formation of corporations for manufacturing, mining, mechanical or chemical purposes," passed March 12th, 1849. Its capital stock is one hundred and fifty thousand dollars, divided into fifteen hundred shares of one hundred dollars each.

Owing to the extreme hot weather last summer, the company was delayed in getting their machinery up, and their works started as soon as they hoped and contemplated. The object for which its members have combined is to manufacture vegetable or rosin oil, to be used for lubricating machinery, for currying leather, for painting, for burning, in the manufacture of varnishes, and the various arts. The works are located in Bremen. The building and machinery are of the first order, and are said by competent judges to be the best in the United States.

The works are now in operation, working eight hands, and producing about 400 gallons refined oil, 150 gallons naptha, and 3 barrels pitch per day.

The Adventures of the Last Abencerage.

From the French of Chateaubriand.

BY I. W. TAYLOR, ESQ.

When Boabdil, the last king of Grenada, was obliged to abandon the heritage of his fathers, he paused, in his flight upon the summit of Mt. Padul. From this elevated point one could behold the sea upon which the unfortunate monarch was about to embark for the shores of Africa. The observer could also perceive from the same spot the city of Grenada, La Vega and Xenil, upon whose environs were visible the tents of Ferdinand and Isabella. In view of this beautiful country and its mournful cypress, which marked at intervals the site of Moslem graves, Boabdil could not restrain his starting tears. His mother, the Sultana Aixa, who with other grand dignitaries of his former court, accompanied his exile, witnessing these evidences of excited sensibility, exclaimed to her son, "Weep now like a woman for a kingdom which you knew not how to defend as a man." They then descended from the mountain top, and Grenada disappeared from their eyes forever.

The Moors of Spain, sharing the fortunes of their king, dispersed themselves through Africa. The tribes of the Zegris and the Gomeles, established themselves in the kingdom of Fez, which land was their ancestral home. The Vanegas and the Alabes, diffused themselves between the coasts of Oran and Algeria. Finally, the *Abencerages* fixed their abodes in the neighborhood of Tunis. They created, in view of the ruins of Carthage, a community which is distinguishable to this day, among the Moors of Africa, by the elegance of its manners and the amenity of its laws. The families of this new commonwealth carried into their state the souvenirs of their ancient country. The paradise of Grenada lived ever in their memories, and mothers even whispered the name in the ears of their unconscious babes. Infancy was cradled and its dawning powers of soul fed with legends of the Zegris and the Abencerages. Each fifth day the prayer ascended from the mosque, from worshippers whose faces were turned towards their loved Grenada. The great Allah was invoked to bestow upon his chosen children that land of charms and radiant beauty. 'Twas in vain that the fields of the Lotophages offered to the exiles its fruits, its waters, its smiling verdure and its brilliant sun. Far removed from the *Crimson Towers*, there was for the exiles neither pleasant fruits, nor limpid fountains, nor refreshing verdure, nor a sun in the

heavens even, worthy to behold. Point out to any one of them the plains of Bagrada, and with mournful manner and bursting heart, he could only answer, "*Grenada!*" The Abencerages, above all others, preserved the most tender and faithful recollection of their country. They had abandoned with the profoundest regret the theater of their former glory, and the well fought fields which had resounded so often to their battle cry of "Honor and Love." Being no longer able to poise the lance in the deserts by which they were surrounded, or to invest themselves with the helmet of battle, in the midst of a colony of simple laborers, they consecrated their lives to the study of medicine, a study held in esteem among the Arabs, equal to the profession of arms. Thus it was that a warrior race, whose former occupation had been the infliction of wounds, betook themselves to the more blessed art of healing the grim miseries of war. But even in this peaceful pursuit, they retained some sparks of the martial fire which once inflamed them; for the cavaliers could but bethink themselves of the ravages their flashing steel once had made in the ranks of the opposing foe.

The hut of that royal family which once inhabited a palace, was not placed in the hamlet of the other exiles, at the foot of the mountain of Mamelife; it was built amid the very ruins of Carthage, upon the beach of the sea, at the spot where St. Louis perished at the stake, and where at this day can be seen a Musleman hermitage. Upon the walls of the hut were affixed bucklers of lion skin which bore upon an azure field the figures of two savages, battering down a city with an Herculean club. Around that device could be read these words, "'Tis but a trifle!" This was the arms and the device of the Abencerages. Lances ornamented with white and blue pennons, *alburnos* and knightly vestments of slashed satin, were ranged around bucklers, and were resplendent in the midst of shining cimetars and poignards. The observer could behold, in addition, suspended here and there, gauntlets, bitts enriched with gems, stirrups of silver, long swords in scabbards embroidered by the hands of princesses, and spurs of gold, like those with which Yseult, Genievre and Oriane once shod the feet of valiant knights.

On tables, at the feet of these monuments of glory, were ranged the trophies of peaceful life. These were plants gathered from the summits of Atlas, or plucked from the desert of Zahara. Many of

them even had been brought from the plain of Grenada. Some of these plants had virtues to heal or assuage the maladies of the flesh, and others were supposed benignly to reach and soothe the sorrows of the soul. The Abencerages esteemed those most which served to appease vain regrets, to dissipate foolish illusions, and to drive away those unreal hopes of happiness which are born merely to perish, and smile only to betray. Unfortunately, these simple medicines had sometimes effects opposite to those hoped for: and the perfume of a flower which drew its fragance from the natal soil, was a sort of poison to the souls of the illustrious exiles.

Twenty-four years had rolled by since the fall of Grenada. In that short time, fourteen of the Abencerages had perished from the influences of an untried climate, by the accidents of a wandering life, and above all, from the ravages of that secret and mining sorrow which wins its insidious way against all human strength. One sole branch was now the surviving hope of that once famous house. Aben-Hamet bore the name of that Abencerage who was accused by the Zegris of having seduced the Sultana Alfaima. He united in himself to the manly beauty, the valor, the courtesy and the generosity of his ancestors, that subdued brilliancy and that gentle expression of sorrow bestowed by misfortunes nobly borne. He was but twenty-two years of age when his father died, and he embraced the resolution to make a pilgrimage to his ancestral land to satisfy the cravings of his heart, and fulfil a purpose which he had carefully concealed from his mother.

He embarked at the port of Tunis; a favorable wind conducted him to Carthagena; he descended from the ship, and took at once the way towards Grenada. He announced himself as an Arabic doctor who had come to gather herbs and plants among the rocks of the Sierra-Nevada. A quiet mule carried him gently across that country where once the Abencerages flew on warrior steeds; a guide preceded, conducting two other mules ornamented with bells and linen stuffs of various hue. Aben-Hamet traversed the extensive heaths and palm groves of the kingdom of Murcie. From the age of the palm trees, he judged they had been planted by his fathers, and his heart was penetrated with regrets. On one side would arise a tower, whence the sentinel kept his watch during the wars between the Moors and the Christians; on the other would be visible a ruin whose architecture proved it of Moorish origin. Thus at every turn did objects suggestive of mournful souvenirs present

themselves to the Abencerage! He descended from his mule, and under pretext of searching for plants, concealed himself amid the ruins at hand, to pour freely forth his unbidden tears. He then resumed his route, and went musing on to the sound of the bells of the caravan and the monotonous song of his guide. The latter did not interrupt the long revery of Aben-Hamet, except in encouraging his mules by bestowing upon them the epithets of beautiful and valorous, or upbraiding them by the titles of idle and obstinate beasts.

The flocks which a shepherd conducted, as an army, to the yellow and uncultured plain, and a few solitary travellers, so far from giving an air of life to the lonely way, made it only appear more sad and deserted. Each one of those solitary travellers carried a sword at his girdle, and was enveloped in ample cloak and slouched hat, so that but half his visage could be seen. They saluted in passing Aben-Hamet who could distinguish in what was uttered only the words God, Saviour, Chevalier. In the evening the Abencerage took his place in the midst of strangers, without any importunity from indiscreet curiosity. They neither spoke to nor questioned him; nor did his turban, his robe or his arms, excite any visible sensation. Since Allah had decreed that the Moors of Spain should be deprived of their beautiful country, Aben-Hamet could not forbear to admire the grave demeanor of the conquerors. But still more stirring emotions awaited the Abencerage, as his journey drew towards its end. Grenada is built at the foot of the Sierra Nevada, upon two towering hills which are separated by a profound valley. The houses placed upon the declivities of these hills and in the depths of the valley below give to the city the appearance and shape of a half open grenade, and from this circumstance arises its name. Two rivers, the Xenil and the Douro, the former rolling its flood over sands of gold, and the bed of the latter sparkling with silver grains, flow at the foot of these hills, and then wind gracefully away into the midst of the charming plain of La Vega. This plain, which commands a view of Grenada, is covered with vines and pomgranates, with fig and mulberry and orange groves, and is encompassed by mountains of charming outline and beautiful hue. An enchanting sky and an atmosphere delicious and pure invade the soul with a secret languor which even the passing traveller finds it difficult to resist. One readily perceives that in a land like this, the heroic must soon yield to the tender passions,

except that love in its purity and truth, needs glory for its ally. When Aben-Hamet discovered the tops of the first houses in Grenada, his heart beat so wildly that he was obliged to pause. With arms crossed upon his breast, and eyes riveted upon the city, he rested silent and motionless. The guide also arrested himself in turn, and as all elevated sentiments seem readily comprehensible to the Spaniard, he appeared touched, and divined that the Moore beheld once more his ancestral home.

The Abencerage at length broke the silence. "Guide," exclaimed he, "be thou happy! Do not conceal from me the truth, for calmness rested on the waves at the day of thy birth, and the moon was filling her silver crescent. What are yon towers that shine like stars above that verdant forest?" "'Tis the Alhambra," responded the guide. "And that other castle upon the other hill?" said Aben-Hamet. "That is the Generalife," replied the Spaniard. "There is connected with that castle a garden planted with myrtles, where it is pretended, the Abencerage was surprised with the Sultana Alfaima. Further on you behold Albaizyn, and closer to ourselves the Crimson Towers." Each word of the guide pierced the heart of Aben Hamet. Ah! but it is cruel to have to appeal to strangers, to know the monuments of one's own fathers, and to learn from indifferent lips the history of family and friends! The Guide, putting an end to the reflections of Aben-Hamet, exclaimed to him, "Let us advance, Signor Moor, let us advance, God hath willed it! Take courage. Is not Francis I. a prisoner, at this very day even, in our city of Madrid? God hath willed it." He removed his hat, made a conspicuous sign of the cross, and then belabored his mules. The Abencerage, urging his own forward in turn, exclaimed: "It is written;" and they descended towards Grenada.

They passed near to a large ash tree, celebrated by the combat between Muca and the Grand Master of Calatrava, under the last king of Grenada. They made the circuit of the promenade Alameida, and entered the city by the gate of Elvira. They passed up the Rambla, and soon arrived at an open square surrounded on all sides with houses of Moorish architecture. A kan was open upon the place for the African Moors, whom traffic in the silks of La Vega attracted in crowds to Grenada. Thither the guide conducted Aben Hamet. The Abencerage was too much agitated to taste of repose in his new resting place; his heart was filled with

memories of his country. Being unable to resist the sentiments which agitated his breast, he went forth at midnight to wander through the streets of Grenada. He tried to recognise either by sight or by touch some of the monuments which the old men of his race had so often described to him. Perhaps that towering edifice whose walls were dimly visible through the shadows of the night, was formerly the abode of the Abencerages ; perhaps on that solitary spot were celebrated those fetes which carried the glory of Grenada to the skies. There moved quadrilles resplendent with brocade ; there advanced the galleys laden with arms and with flowers, and with fiery dragons, concealing in their sides illustrious warriors: ingenious contrivances of pleasure and of gallantry. But now, alas! in place of the sounds of the anafin, the notes of the trumpet, and the songs of love, a profound silence reigned about Aben-Hamet. That mute city had changed its inhabitants, and the conquerors reposed themselves upon the couches of the vanquished. "They sleep then, these fiery Spaniards," exclaimed the indignant young Moor, "under the roofs from which they have exiled my ancestors! And I, an Abencerage, watch unknown, solitary, abandoned, at the door of the palace of my fathers." Aben Hamet then reflected upon human destiny, upon the vicissitudes of fortune, upon the fall of empires, upon that Grenada in fine, surprised by its enemies in the midst of its pleasures, and changing suddenly its garlands of flowers for chains ; he seemed to himself to behold its citizens abandoning hearth-stones and habitual fetes, like some convivial revellers who, with disordered apparel, are suddenly chased by conflagration from the festive hall.

All these images and all these thoughts crowded themselves upon the soul of Aben-Hamet; full of sorrow and regrets, he pondered deeply on the execution of the project which had led him to Grenada, when the dawning day surprised him. The Abencerage had lost his way; he found himself far off from the kan, and in an obscure quarter of the city. All things were hushed in the stillness of perfect repose; no sound disturbed the silence of the streets; the doors and windows of the houses were closed; and the noise of the crowing cock in the habitations of the poor, alone proclaimed to them the return time of hardship and toil.

After having wandered a long time, without finding his way, Aben-Hamet heard the opening of a door. He saw come forth a young woman, clad almost as those Gothic queens sculptured upon

the monuments of our ancient abbies. Her black corset garnished with jet bound her elegant figure; her short skirt, narrow and without folds, disclosed a faultless ankle and a charming foot; a mantle, also black, was thrown upon her head, the folds of which she gathered in her left hand closely beneath the chin, so that the whole face was concealed, except her lustrous eyes and her ruby lips. A duenna followed her steps, and a page carried in advance some holy book; two servants habited in her own sable colors, followed at some distance the fair unknown: she was going to matinal prayer which the chiming bell announced in some neighboring monastery.

Aben-Hamet fancied he beheld the Angel Israfil, or the youngest of the Houris. The Spanish maiden, not less startled, regarded the Abencerage, whose noble figure was still embellished with his turban, robe and arms. Recovered from her first surprise, she made a sign to the stranger to advance, with a grace and freedom peculiar to the women of the country. "Signor Moor," she said to him, "you seem but newly arrived in Grenada; would you loose yourself?"

"Sultana of flowers," replied Aben-Hamet, "delight of men's eyes, O Christian slave, more beautiful than the maidens of Georgia, thou hast divined aright! I am a stranger in this city: lost in the midst of these palaces, I can no longer find my way towards the kan of the Moors. May Mahomet touch thy heart, and recompense thy hospitality!"

"The Moors are renowned for their gallantry," replied the fair Spaniard with the softest of smiles; "but I am neither the Sultana of flowers nor a slave, nor content to be recommended to the grace of Mahomet. Follow me, Signor Cavalier; I will reconduct you to the kan of the Moors."

She walked lightly in advance of the Abencerage, led him to the door of the kan, indicated it by a motion of her hand, passed behind a palace, and disappeared.

To what then tends the repose of life! Thoughts of country no longer occupied the undivided soul of Aben-Hamet: Grenada had ceased for him to be either deserted, abandoned, widowed or solitary; it was indeed more dear than ever to his heart, but it was a new glory now, which shed its radiance over the ruined city: with the memory of his ancestors, there was mingled now a new-born charm. Aben-Hamet had discovered the cemetery where reposed

the dust of the Abencerages; but in praying there, and prostrating himself and pouring out his filial tears, the thought thrilled his heart that the young Spaniard had sometimes passed by these tombs, and he ceased to think the lot of his fathers so unhappy. It was in vain that he sought to occupy himself solely with the duties of his pilgrimage to his ancestral land; useless that he wandered at the early blush of morn, to gather the dewy plants from the borders of the Douro and the Xenil: the flower which he sought now, was the charming Christian maiden. What ineffectual efforts had he not already made to find the palace of his enchantress. How often had he tried to traverse the same streets through which he had followed his heavenly guide! How frequently did he cheat himself with the delusion that he recognised the sound of the same bell, and the crowing of the cock, which he heard first when near the mansion of the fair Spaniard! Deceived again by similar illusions of sense, he would fly to other places, but still the magic palace ever escaped his eager search! Oftentimes nevertheless the similarity in costume among the women of Grenada, gave him a thrill of delicious hope: at a distance all the Christian women resembled the mistress of his heart; on closer view no one possessed either her beauty or her matchless grace. Aben-Hamet had finally made the circuit of all the churches in quest of the beautiful stranger; he had penetrated even to the tomb of Ferdinand and Isabella; and *this* was a sacrifice to be made only at the command of love. One day he was gathering plants in the valley of the Douro. Upon a flowery slope to the south he beheld the walls of the Alhambra and the gardens of Generalife; the hill to the north was adorned by Albaizyn, by smiling orchards and by grottoes teeming with population. At the western extremity of the valley could be seen the bell-towers of Grenada, which elevated and grouped themselves in the midst of evergreen oaks and cypress trees. To the eastward, the eye beheld perched on the summits of the rocks, convents, hermitages and the ruins of Illiberie, and still further in the distance the towering peaks of the Sierra-Nevada. The Douro rolled its current in the midst of the valley, and presented in its extent a vista of dripping mills, noisy cascades, the broken arches of a Roman aquaduct, and the ruins of a Moorish bridge.

Aben-Hamet was no longer either sufficiently wretched or happy, to enjoy the charm of solitude: he traversed with distraction and indifference to these enchanting shores. In wandering at hazard,

he followed a shady avenue which swept along the declivity of the Albaizyn. A country house in the midst of an orange grove soon attracted his eye: on approaching the leafy covert, his ear was saluted with the sounds of a voice and guitar. Between the voice, the features and the soul of woman, there is a mystic relationship, which at once speaks to the conscious heart of the lover. "That is my Houri!" said Aben-Hamet; with palpitating heart he listened: at the oft repeated name of the Abencerages his soul was fired with still more unbounded transport. The unknown minstrel was chanting a Castilian romance which recited the history of the Abencerages and the Zegris. Aben-Hamet could no longer control his wild emotion; he leaped the opposing myrtle hedge, and precipitated himself in the midst of a group of frightened maidens, who ran screaming away. The lovely Spaniard who was singing and holding still her guitar, exclaimed, "It is the Signor Moor!" and she recalled her companions. "Favorite of the Genii," said the Abencerage, "I have sought you as the Arab seeks a fountain in the fiery realms of the sun; I heard the sounds of your guitar, you celebrate the heroes of my country, the beauty of your accents informed my soul that it was you, and I lay at your feet the heart of Aben Hamet." "And I," replied Donna Blanca, "in thinking of you, was rehearsing the romance of the Abencerages. Since first we met, I have thought of you as a type of those Moorish Cavaliers." A delicate crimson glow suffused the face of Blanca in pronouncing these words. Aben-Hamet felt himself ready to fall at the feet of the young Christian and declare himself the last Abencerage; but a little remnant of prudence restrained him; he feared lest his name, too famous at Grenada, should give inquietude to its governor. The Moorish war was hardly terminated, and the presence of an Abencerage at such a moment could but inspire the Spaniards with a just alarm. Not that any peril could shake the soul of Aben-Hamet; but he trembled at the thought of being obliged to quit forever the presence of the daughter of Don Rodrigo.

(To be continued.)

De Bow's Review and Commercial Resources.—We are pleased to learn that the talented and enterprising Editor of this able and useful work has returned to the editorial chair, resolved, if practicable, to make his labors even more useful than heretofore. The work has been enlarged to 144 pages, and the January number is replete with interesting and useful matter. "The place of publication will be New Orleans and Washington City."

THE

WESTERN JOURNAL

and Civilian.

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ARTICLE I.

Commerce and Government.

The accounts of laborers turned out of employment and destitute of subsistence, which daily reach us through the medium of the public press, have induced us to resume the subject of commerce and government from the leading article of the last number of the Western Journal and Civilian.

We are far from supposing that the government is chargeable with all the vicissitudes and embarrassments incident to the industrial pursuits of the country; but there is an inseparable relation between government and commerce, by reason of which the latter is necessarily affected by the acts of the former, and hence the government cannot escape from at least a portion of the blame in all cases of great financial embarrassment.

Labor being necessary to the production of property, the legislator should endeavor to guard the operatives as far as practicable against the want of profitable employment; and in all acts of legislation touching the public economy, he should aim to call into active operation all the labor and skill which the country affords. For it is obvious that any public measure calculated to deprive men of profitable employment, is an evil both individual and national.

The consequences that flow from public measures or other causes which deprive individuals of employment, are not generally appreciated; for the reason that, with rare exceptions, men are not in the habit of looking beyond the immediate inconvenience and privations of the operative. To illustrate the effects of a public measure calculated to depress the profits of any particular branch

of industry, and deprive the operatives of employment, we will take the iron trade as an instance.

The iron trade of Great Britain has been developed by a system of protection. The business in that country is based upon solid capital; the operatives in every department are skillful and thoroughly trained, and the iron masters acting in concert expand or contract their operations and prices according to the nature of the demand. Thus firmly established and acting together, it is always in their power to control the iron trade of this country, and drive our operatives out of employment, unless they are sufficiently protected by a tariff on the importation of foreign iron. Now, if for want of such protection, ten thousand operatives should be turned out of employment, it is obvious that the increase of the national wealth would be diminished; and besides the inconvenience and pecuniary privations to the operatives, the home market for agricultural products would be lessened, and the demand for foreign iron increased. In such a case, the operatives who would be compelled to engage in farm labor, would increase the competition in a department of industry already supplied with hands sufficient, in ordinary times, to overstock the markets with its products. But in a national view, the losses do not stop here: the quantity of iron, which would have been produced by the operatives turned out of employment, must be purchased abroad, and after making all legitimate deductions, we think it will clearly appear that the price paid for the iron of foreign make would be a total loss to the national wealth. This illustration is applicable to most, if not all, branches of industry in which the operatives are employed in converting our own raw material into commodities suitable for use and consumption.

No people can be permanently prosperous who pursue a policy which subjects their industrial pursuits to the control of other nations; for besides the political and financial vicissitudes which occur among themselves, they are continually liable to be affected by the ever changing condition of the countries with whom they carry on an extensive commerce. This proposition is fully illustrated by our commercial relations with Great Britain. Through the medium of these relations we are made to feel the influence not only of her political, industrial and financial institutions, but are materially affected by the character of her seasons and crops.

The statesmen and public economists of the United States, look-

ing to the policy of Great Britain as an example worthy of imitation, seem to have confined their view to the present condition of that country without studying its history during the long period when protection to British industry by a high tariff of duties was the established and cherished policy of the government. Were they to study the history of England from the beginning of the eighteenth century to the present time, they would discover that protection to home industry has been the settled and uniform policy of both the government and people, throughout this entire period. While the business of manufacturing and mining was comparatively limited, capitalists were encouraged to invest their means in those pursuits by the enactment of laws calculated to protect them against foreign competition. But when the products of those departments of industry began to exceed the home demand, the government adopted a new principle of protection, which consisted in abolishing the duties on raw material, and reducing the tariff on the more neessary appliances of subsistence. There can be no doubt of the wisdom of this policy, for it enabled the English manufacturers to compete with all other nations in foreign markets, and to extend their business indefinitely. Thus we perceive an admirable consistency in the policy of that country in respect to manufacturing and mining throughout all their stages. This indirect mode of protection is denominated "free trade" by the people of Great Britain, and charmed by the term without comprehending the extent of its application, a certain school of political economists in this country seems disposed to repudiate protection to American industry in all its forms. Impelled by a desire to extend our commerce with foreign nations, they would dry up its sources at home. They would exhaust our own soil to fertilize foreign fields, and feed foreign operatives. They would leave the amount of production in this country to depend upon the strength of the human arm, and exchange the products of American toil for the fabrics of foreign machinery. In fine, they seem to be deluded by the idea of enriching the nation by foreign trade without first establishing a solid basis for its operations.

It is not in the nature of things, that a nation can increase its wealth by exchanging its raw material and products of manual labor for the fabrics produced by the machinery of other countries. For, whether the raw material be taken from the forest, the mine, or the cultivated field, it is so much drawn from the wealth of the

country, which must be exhausted in time if the process is continued. The case is altogether different however in respect to a manufacturing people: they acquire wealth by exchanging the products of their own art for the raw material of other countries. Intellect, science and machinery constitute their chief elements of wealth, and so far from being exhausted by producing articles of value, they improve and become more productive by use.

It is not until a people become producers of manufactured commodities beyond the amount required for domestic consumption, that their national wealth can be materially increased by foreign commerce.

The history and present condition of the older States of the Union most fully attest the truthfulness of the views which we have attempted to illustrate. Some of those States eschewed manufacturing, and persevered in producing grain and other agricultural products for exportation until they exhausted their soil; and many of their citizens being unable to obtain subsistence from their worn out fields, were compelled to emigrate to new countries, while the States which devoted more attention to manafactures have steadily increased in wealth, though possessing a soil and climate less favorable to agriculture than their southern neighbors. Here is a lesson for the study of the people inhabiting the new States, and we trust they will profit by its teachings.

In our efforts to place the industry and commerce of this country upon a solid basis, we have uniformly addressed our arguments to the people; the subject is one which involves the well-being of themselves and their posterity to an indefinite period. It is vain to appeal to politicians or Congress until the subject is understood and fully appreciated by the people—the real producers—who supply commerce with its commodities; and, in their two-fold character of producers and consumers, support the merchants, the carriers, the bankers and a numerous host of non-producers who live by their wits and revel upon the products of honest toil.

It is of vital importance to the new States that sound principles of political economy should be adopted in the beginning of their career; for when the industrial pursuits and economy of a community have been established upon wrong principles, the vice is transmitted from one generation to another, and a reform is scarcely practicable, until the consequences are fully developed. Such has been the case with some of the older States of the Union, and

such must be the condition of the new States, if they supinely acquiesce in the policy dictated by Great Britain, and advocated by some of our own statesmen.

The valley of the Mississippi is too remote from the European markets to carry on a profitable exchange of commodities with the producers and consumers of that country. For whatever may be our facilities of transportation, the people of the Atlantic slope and of Canada, by reason of their proximity to the Atlantic ports, possess advantages over us which we can never overcome. Hence it is obvious that, unless the inhabitants of the Mississippi valley diversify their pursuits, avail themselves of the agency of machinery, and establish a home market for their raw material, they must be content with smaller profits on their labor than are realized by their eastern brethren. But possessing the elements of wealth in profusion, we could by a judicious system of economy equal, if not excel, any other people upon the globe in the acquisition of individual and social wealth. But to enable us to realize this state of prosperity, we must have the co-operation of the General Government. We should not ask for a tariff which would operate as a total prohibition of any foreign commodity, but insist upon the constitutional right of a reasonable degree of protection to our industry in all its varied departments—protection to labor, protection to capital, and protection to machinery. Or, in the words of President Jackson, let us insist upon the adoption of "a judicious tariff," to be adjusted by the common sense of the people, and adapted to the common wants and common welfare of the nation.

But the opinion is entertained by some, that, were all departments of American industry sufficiently protected to enable us to compete successfully with the labor and skill of other countries, the benefits of such a measure would be monopolized by the Eastern States, while no advantage would be gained by the people of the West. The history of tariffs and manufactures in this country gives plausibility to this opinion, but it may be observed that some important changes are going on in the condition of the Western States, and also in the minds of men both in this country and in Europe, respecting certain principles of economy. It will not be long before the railroads of the West, in connection with river navigation, will afford facilities for collecting raw material and distributing fabrics which will not be surpassed by any other country of equal extent. This will remove many objections which have

heretofore existed against manufacturing and mining in the valley of the Mississippi.

And besides, mankind are generally coming to the very rational conclusion, that it is more convenient and profitable to go where bread, provisions and raw materials abound, than to pay the cost and charges incident to their transportation across continents and oceans during their lifetime. With these facts in view, it is reasonable to conclude that, were sufficient protection given to manufacturing and mining, capital and labor would seek the valley of the Mississippi for employment rather than locate in the Eastern States. But should this not be the case, it would still be much better for the West to exchange its commodities with the Eastern States than with foreign countries.

We are not so vain as to imagine that anything we can say will in the slightest degree affect the policy of the present administration; but regarding the protection of American industry as a great national measure in which the people of the West should feel a special interest, we conclude that it is time that the discussion of the subject should be commenced with reference to the next presidential election.

We are aware that some of our patrons are opposed to the adjustment of a tariff with a view to protection, and to such, and indeed to all, we desire to say that we have not discussed the subject in a partizan spirit. We have aimed to treat it simply as a branch of political economy, to which we have given much consideration; and feeling a deep conviction of the soundness of our views, we should have done violence to our sense of duty as public journalists, had we not given them to our readers.

Having placed our views and opinions upon record, we dismiss the subject, leaving its further discussion to the newspaper press and the people to whom we commend it, not as a party question, but as a national measure, upon the issue whereof depends, in a good degree, the independence and permanent prosperity of our common country.

ARTICLE II.

An Essay on the Preservation of Universal Peace.

BY HON. A. BEATTY.

Continued from page 200.

It may be asked, how shall we be able to transport to Liberia the great number of persons of colour now in the United States, and the rapid increase of those numbers, as shown by our census? I will endeavour to show that this is quite practicable. The coloured population—free and slaves—in 1790, as compared with the white population, was as 1 is to $4\frac{26}{100}$, and in 1850, as 1 to $5\frac{49}{100}$, throwing off minute fractions. During the intervening period the slaves of Louisiana, acquired by purchase, were introduced, and but few colonists sent to Liberia. It must be recollected also that the importation of slaves from Africa was not prohibited until after the year 1808. Yet the white population had so far exceeded the increase of the coloured as to stand $5\frac{49}{100}$ instead of $4\frac{26}{100}$. In future there can be no importation of slaves from Africa, and the number of emigrants and colonists to Liberia is annually increasing. From these facts we can safely infer, that in future the relative increase of the white over the coloured population will be considerably enlarged. The increased emigration from Europe, amounting probably to a quarter of a million annually, will largely increase the disproportion between the white and black population. Now if our *ability* to colonize our coloured population should increase only in proportion to the increase of our white population, it is evident that the increase of our coloured population will present no obstacle to the complete colonization of them.

But as our commerce and wealth increase much more rapidly than our population, our *ability* to colonize persons of colour will increase relatively, much more rapidly than our coloured population will increase. Consequently, our *means* for colonizing *all* our coloured population will every year increase.

It is asked, whence are to be derived the resources necessary to colonize the half million of persons already free, and those hereafter voluntarily emancipated, or emancipated by a system of gradual emancipation, adopted by one or more of the slaveholding States? If we reflect for a moment upon the *fact* that two hundred thousand poor emigrants annually find the means of paying their passage across the ocean, from the various countries in Europe, in order to become citizens of this free republic, surely no reasonable man can doubt our *ability* to transport an equal number to Liberia every year.

But in the present condition of the Liberian republic. she would not, during the next twenty years, be able to receive and sustain comfortably an *average* of more than twenty-five thousand annu-

ally, equal to half a million in twenty years. In the succeeding twenty years she will probably be able to receive and sustain upon an *average*, fifty thousand, equal to one million for the twenty years. In the next period of twenty years, she will probably be able to receive and sustain upon an *average* one hundred thousand annually, equal to two millions for the twenty years. For the next twenty years she will probably be able to receive upon an *average* two hundred thousand annually, equal to four millions for the 20 years, and seven millions and a half for the entire period of eighty years. If we add to this number of *colonists* the emigrants of free persons of colour, during the period of eighty years, to the Liberian republic, the number of *coloured* persons now in the United States (by the last census 3,633,150,) and their *future increase* will have been nearly exhausted. There would probably be left only a few aged persons of colour who may be unwilling to emigrate to Liberia.*

Thus it will be seen that two hundred thousand annually will be the greatest number to be colonized in any one year, and that number only after the lapse of nearly eighty years, when we shall have a white population of one hundred millions in the United States.

I have thus shown that we have abundant means for colonizing the whole of our coloured population; and that the work can be fully accomplished within a period of eighty years, provided the slaveholding States shall second the system of colonization by furnishing with sufficient rapidity subjects for carrying it on with the requisite speed. Voluntary emancipation will contribute more and more, every year, to carry on the benevolent work of freeing our coloured population. By the census of 1850, the number of free coloured persons was 428,661. The natural increase, together with those since emancipated and not sent to Liberia, would probably make the actual number, on the 1st of January, 1855, half a million. If these were all willing to go to Liberia, they would afford a full supply of colonists during the first period of twenty years. But some of these would doubtless refuse the offer of a free passage to Liberia. The deficiency occasioned by such refusal would probably be made up by the natural increase, after 1st of January, 1855, and voluntary emancipations during the first period of twenty years. During the second period of twenty years, we must look to other sources for a sufficient supply of colonists to carry out the proposed plan of relieving the country from the evils of slavery. This supply can only arise from the adoption of a system of gradual emancipation by some of the slaveholding States, whose example will be followed by others, in proportion as the increased white population shall relieve the several States from

* This estimate allows for an increase of coloured population of near four millions during the eighty years.

the necessity of slave labor, and show by experience that *free labor* is more profitable than the labor of slaves.

The adoption of a system by which children of slave parents born thereafter, shall be free at a given age, say twenty-one or twenty-four years, cannot be objected to on the ground of interfering with *vested rights*, because no person can have a *vested right* in children thereafter born; nor can such a system be charged with *injustice*, because the *services* of boys and girls till the age of twenty-one or twenty-four will afford a full compensation for rearing them, and learning them to read and write, and simple arithmetic.

It may be objected, that by the refusal of some of the States to adopt a system of gradual emancipation, the proposed system for relieving the country from the evils of slavery, cannot be fully carried out. If such should be the case, the good work would notwithstanding be accomplished *in part*, and we may safely trust in the good Providence of God, that so benevolent an undertaking will be fully accomplished in his good time.

If I have not made a sufficient allowance for the natural increase of the coloured population of the United States during the eighty years estimated for the colonization of the coloured race in Liberia, an additional twenty years will be amply sufficient to complete the glorious work of restoring the children of Africa to their native homes.

I have shown that the United States do now, and will possess sufficient resources to colonize the entire race of coloured persons. But the means by which these resources can be brought most conveniently to aid in carrying on the system of colonizing persons of colour, will be best learned by experience.

Hitherto voluntary contributions of benevolent individuals, and liberal grants by some of the States, have furnished the means of sending to Liberia as many colonists as could be conveniently provided for. But the capacity of that Republic for receiving colonists, is increasing so rapidly that largely increased numbers may be sent out annually, if the necessary funds are provided. A reasonable hope may be indulged that so many additional States will liberally contribute to this object, in each succeeding year, as to enable the colonization society to send to Liberia the numbers in each twenty years, estimated in this essay.

But if there should be a failure to derive resources from States and individual contributions to such an amount as would be requisite to carry on the system with the necessary speed, other means must be resorted to. On this subject, I make another quotation from the eloquent speech of Dr. Fuller:

"God calls upon us to make some atonement for the wrongs which have been done by our forefathers to that continent (Africa). I say there are multitudes this day, who are willing to impoverish themselves and their children, if they can see how they can benefit

these human beings, and Congress ought to meet such cases promptly. Let us improve man. That is the highest aim. Now I am going to venture an opinion. I think Congress ought to go further. I am no statesman, no politician; I am an humble minister of God, and what I am now about to say, will perhaps seem like insanity to some people, but if it be insanity, it has come upon me as insanity never came upon man—by the painful, prayerful, calm protracted contemplation of a great subject. Let not what I say then be scouted; let it be weighed and pondered calmly. I am supposing now that there are many at the South who are anxious to do something for the African, but see not what they can do; and I am supposing that the multitude at the North feel, as I know they feel, a willingness to make sacrifices for this purpose, but they see how valueless are harangues and books, and pictures and prints, because the destiny of the African is in the hands of his master. Supposing this state of things to exist, and I believe it exists to an extent of which few have any conception, cannot the Legislation of this Union be wisely adjusted so as to meet such an emergency? I am not given to circumlocution when I have anything to say. What I wish to say is this: does not a sacred duty to Africa, and the salvation of this country, truth, love, justice, require that Congress should be ready to interpose, not merely to deport, but to redeem, to purchase the slaves of those who are willing to engage in an arduous, tedious, but most sublime undertaking? "Why," says the abolitionist, "we never will consent to that in the world, it is acknowledging the right of the master." But is that man a friend to the African? The right exists; no earthly authority can destroy it; and is not the elevation of a human being better than the maintenance of these absurd abstractions? But I put out of view the fact that we of the South, obtained a good part of these slaves from the North, who imported them into our Southern harbors. I wish to mention a very singular fact, and if Dr. Wayland was here, I have no doubt he would not object to my mentioning it. At the time he was writing letters to me against slavery, and I putting it upon the true ground on which it stood, he was situated in Providence, R. I., and I in Beaufort, S. C. Some of my ancestors recollected the time when out of Providence the slave ships brought slaves into Beaufort, S. C., and my forefathers bought them from the very people who built up Providence. But I put out of view that fact; and I say to those abolitionists, admit, for argument's sake, a calumny which I deny and detest, that we are robbers; suppose your child is in the hands of a robber, will you redeem that child and set him free, or will you say it would be admitting the right of the robber, and I will not redeem him?"

Here is a true statement of the case. If the South is blameable for holding Africans in slavery, the North is equally blameable for carrying them thither and selling them for slaves. All parts of

our country are to blame for not having hitherto adopted more efficient measures for the removal of the evils of slavery. "God calls upon us to make some atonement for the wrongs which have been done by our forefathers." If we hesitate, if we fail to do our part, each one of us will have to share in the responsibility. God is *just.* In his good time he delivered the Israelites from the tyranny of the Egyptians; and he afflicted them sorely for refusing to let them depart. Let us, while there is yet time, commence the making of atonement for the wrongs of our forefathers, and our own wrongs, in holding our fellow-beings in a state of slavery. A sudden and immediate emancipation would be attended with great evils to both the white and black races; but a system of gradual emancipation would be followed by great benefits to all concerned; and would be making the proper atonement for past errors.

During the administration of John Quincy Adams our revenues from imports averaged about twelve and a half millions of dollars; and were sufficient to meet all the economical wants of the country. In twenty-four years the revenues have risen to fifty millions per annum, and will probably continue to increase at least as rapidly as our population. The United States could furnish abundant means for carrying on the proposed system of colonization without being at all cramped in its fiscal operations. Nay it would be the most useful and profitable way of appropriating its surplus revenues, and would do away the temptation of engaging in war to relieve the over-burdened treasury. If the power of Congress to make appropriations for freeing and colonizing our coloured population, should be objected to on constitutional grounds, and if such objections are well founded, *let the constitution be so amended as to confer the power.*

God permitted the African race to be brought to our shores for purposes of ultimate good. That good will be accomplished by restoring them to their native country, by whose means God will rear up a great Christian nation composed of colonists and civilized natives, and who, in the wise dispensations of the Divine Ruler of the Universe, are destined to spread Christianity over this quarter of the globe. Dr. Fuller remarks, "Here am I, a Christian —I look to God in this matter, and to God alone. I have ceased from man long ago. If anything *be* done, it must be prompted by a christian spirit and principle."

If this were an essay on colonization, I would deem it proper to refer to other speeches delivered on the occasion on which Dr. Fuller spoke so eloquently, particularly to the very able and eloquent speech of Mr. Clay, and the very instructive and interesting speech of Mr. Latrobe.

To understand the subject of colonization fully, the history of the society, from its origin in 1817, down to the present time, should be carefully examined, from which the most favorable conclusions as to its ultimate and complete success would be drawn.

But this is an essay on the cessation of *war*, and the means of preserving *universal peace* among all nations. I have only deemed it necessary to examine the slavery question so far as it has relation to the best means of preventing a dangerous collision among the States of the Union, arising out their difference of opinion in relation to our coloured population, and the best means of settling that vexed question.

Patience and *union of effort* will, in time, bring about an adjustment of this subject, by perfecting and carrying out a practical scheme of colonization; and in this way only can this distracting subject be completely quieted.

But without the exercise of great prudence and wisdom, there will be danger in the meantime of a collision arising out of the application of new States for admission into the Union with or without restriction as to slavery.

By the Missouri compromise, that State was admitted without restriction as to slavery, and by a permanent provision of the act of Congress, admitting Missouri, it was provided that no State formed out of the then Territory of the United States, lying north of 36° 30′ North Latitude, should thereafter be admitted with the institution of slavery. The fair inference from the law is that no objection was to be made to the admission of slaveholding States, formed out of Territory lying south of the line 36° 30′ North Latitude. This compromise was carried into effect, and quieted all agitation on the subject of admitting slaveholding States into the Union for a period of thirty years. But upon the acquisition of California, which was not embraced by the Missouri compromise, and containing territory lying on both sides of the compromise line, a new difficulty was presented. It presented a case not embraced by that compromise, and a new principle was settled as to States formed out of that Territory, that the citizens of such States should decide whether slavery should be excluded or admitted.

The question seemed now to be settled, both as to the Territory owned by the United States, when the Missouri compromise took effect, and as to Territory since acquired.

If the question had been permitted to rest here, it might have been reasonably hoped the same good effects would have resulted, which followed the Missouri compromise. But unfortunately there was a clause introduced in the bill, establishing the Kansas and Nebraska Territories, which repeals the slavery restriction as to States formed out of the United States Territory lying north of 36° 30′ North Latitude, which again throws open the question of slavery restriction upon the application of new States for admission into the Union. The United States never produced a more clear sighted and far-seeing statesman than Mr. Clay. To show his views in relation to the Missouri compromise and the happy effects of that measure, I quote the following extract from a speech of his delivered at Lexington, soon after that measure took effect.

"With respect to the subject which no doubt suggested the expression of the leading sentiment of the toast with which he had just been honored, he would say that he had certainly felt most intensely the awful importance of an amicable settlement of the Missouri question, and he had devoted himself to it with his utmost zeal. Nor would he under any affectation of humility deny that his exertions may have somewhat contributed to putting it to rest. But its adjustment ought mainly to be ascribed to those strong feelings of attachment to the Union which exists in all parts of it; to the deep conviction that *without it our country would be* exposed to the greatest calamities, rent into *miserable petty States, and then convulsed by perpetual perils and wars:* and to those patriotic members of the House of Representatives from the other section of the confederacy who nobly risked their personal popularity for the good of the whole nation. The question, we may indulge the hope, is happily settled. And we should hasten to forget all the painful and disagreeable incidents by which the agitation of it was attended.*

I have italised one clause of the extract to show Mr. Clay's strong conviction of the evils which would have resulted from leaving the question unsettled when agitated in 1821. Mr. Clay indulged the hope that the question was "happily settled;" but the last Congress has again unsettled the distracting question, and the solemn question now is, what is the proper remedy? Obviously to correct the error of the last Congress by repealing the *repealing clause* in the Nebraska bill, and re-enacting the compromise confirming 36° 30′ North Latitude as the permanent boundary between the slaveholding and non-slaveholding States.†

II. Difference of opinion arising from the supposed antagonistic *interests* of the different parts of the United States, forms the next most threatening cause of separation and consequent wars between the different subdivisions of this great Republic.

This subject has been the fruitful source of political agitation in the different parts of the Union in times past; and on some occasions the matter assumed a very threatening aspect. Time has softened down the excited feelings and asperities of political partizans, and there is now just grounds for hoping that the subject will undergo a more calm and dispassionate consideration.

The population of the Union is now more than twenty-six millions, and experience shows that our numbers (white and coloured,) will double in twenty-five years, and, consequently, in fifty

* Niles' Register, vol. 20, p. 301.

† NOTE.—Having expressed no opinion through the medium of our Journal in respect to the act repealing the Missouri compromise, we take this occasion to state that though we were decidedly opposed to that provision in the "Nebraska Bill," yet as we can perceive no practical benefit to be derived from restoring the boundary line between the free and slave States as defined by the law of 1820, we are disposed to submit to the present law rather than to see the subject again agitated.—*Editor of W. J. & C.*

years our population will be at least one hundred millions. The consumption of sugar will increase at least as fast as our population. If we remain united, the sugar planters and cultivators of rice will supply almost exclusively this vast and rapidly increasing population, because of the protection of a duty for revenue purposes, or even beyond that if necessary to encourage these important productions of home industry. Such protection will give *steadiness* to the home market, and thus the producers of sugar, knowing the extent of the home market, will be able to direct all their energies to produce such a supply as will supercede the necessity of importing any considerable quantity of sugar except when some casualty may greatly reduce the home supply, and then importations will only be temporary. But if the cane-growing States were severed from the Union, their productions would be subject to the same duty as other imported sugars would have to pay, and consequently the profits of the sugar planters would be reduced so much per pound as would be equivalent to the duty on other sugar. Besides he would have to compete on terms of equality in the American market with the producers of sugar in all countries fitted for the production of that article. A moment's reflection will convince the growers of the sugar cane, that their interests would be most materially injured by a severance of the Union, and the constituting of an independent Republic composed of the cotton and sugar producing States.

The advantages of the Union to the cotton growing States are equally manifest. The rapid increase of our population will not only furnish a very great and rapidly increasing market for raw cotton for *home consumption*, but this market will be greatly increased to furnish our manufacturers with the raw material to supply the *foreign demand* as well as the *home consumption* of their cotton fabrics.

Experience shows that our manufacturing establishments of cotton cloth have already obtained such perfection as to enable them to furnish cotton cloth of certain descriptions at so low a rate as not only to supercede importations from abroad, but that they can successfully compete with *British manufactures* in foreign markets. A few years ago this was thought to be impossible; now it is a well ascertained fact. And as we are every year acquiring more and more experience, our success in meeting British competition in markets where both are admitted upon terms of equality, will become more and more obvious. It was thought such a state of things could never be realized, because of the great cheapness of labor in Great Britain. But this disadvantage is more than overcome. 1st. By the lower price of the raw material grown in our own country. 2. By the extensive use of machinery and water power. 3. By the great ingenuity and skill of American mechanics in bringing all improvements to the highest state of perfection. 4. By the cheaper subsistence of workmen, in conse-

quence of the cheaper living in this country than in England. And 5. By the increased price of labor in England occasioned by the vast increase of emigration from that country to the United States.

Giving due weight to these circumstances, we may confidently conclude that, at no distant day, the cotton mills of the United States will not only manufacture *all the cotton fabrics* required for home consumption, but that an immense amount of them will be shipped to foreign markets. How very important then will be the home market for raw cotton to the cotton growing States for all time to come, if we remain a united people. If the Union should be severed, the cotton growing States would no longer enjoy the exclusive benefit of the home market for raw cotton. It would be subject to such duties and restrictions as the importing country should think proper to apply. It would moreover have to meet the introduction of India raw cotton upon terms of equality.

The growth of raw cotton, within the next fifty years, in South America and Africa, will be greatly increased, and would very much interfere with the culture of that article in the United States, if the home market were not protected by a duty on the foreign production. But there need be no apprehension of such interference, whilst there is secured to the home production the exclusive benefit of the home market, and an equal participation in the advantages of all foreign markets.

But citizens of the Middle and Western States may complain that, by protecting the home production of sugar and raw cotton, by levying a duty on the foreign articles, they will be compelled to pay a higher price for these articles, than if they were suffered to come into free competition with the home product; that the duty on the foreign articles is *a bounty* to the home producers, paid out of the pockets of the people who consume these articles; and that, therefore, they are *taxed* to increase the profits of the producers of cotton and sugar.

But let us calmly enquire whether there is any just ground of complaint on this score. It may be true that the consumers of sugar, in the present state of things, may pay a small sum more for that article than they would be obliged to pay *temporarily*, if the duty on sugar were discontinued. At present the sugar growing country affords a very valuable market for bread stuffs, beef, pork, lard, tallow, butter, cheese, and other articles; and for the manufacture of hemp, rope, cotton bagging, &c., and cotton goods of all kinds. These and other productions of the Middle and Northern States enable them to carry on a very valuable commerce with the sugar producing part of the Union. But if foreign sugar were to be admitted free of duty, or at a low *ad valorem* rate, the article would be so much reduced in price that Louisiana and other States engaged in the culture of the sugar cane, would no longer be able to continue the production of sugar; and of necessity, the cultivators of that article would be obliged to turn their attention to some other agricultural product. They must have bread and

other necessary articles of subsistence. They could no longer exchange sugar for them. They would of necessity be compelled to rely upon their own productions, such as corn, rice, potatoes, millet, banana, &c. Although the raising of hogs, grazing of cattle, mules, sheep, &c., may not be very suitable to their climate, yet as they could no longer procure a supply of these essential articles in exchange for sugar, necessity would compel them to produce them. And now what advantage would the consumers of sugar gain by procuring a supply of that article a cent a pound cheaper than they now pay for it? The cultivators of wheat, rye, barley, oats and corn; and the producers of stock-hogs, cattle, sheep and mules will have lost a most valuable market for these articles, and the value of those for which a market may be found elsewhere, would be considerably lessened in consequence of the production exceeding the demand. The loss thus sustained will exceed more than five-fold the amount saved by the consumption of *cheap sugar*. But this is not all. The West India cultivators of sugar—as it will be their interest to do—will send us such quantities of sugar at low rates, as will effectually break down and destroy the culture of the sugar cane in the United States ; and when this is accomplished, having now the command of the market without competition, and that being but scantily supplied, in consequence of the diminished production, they will have it in their power to increase the price so as to make consumers pay more in a few years, than they would have paid if the duty on foreign sugar had not been reduced. This reasoning will apply to all other consumers of sugar as well as to agriculturists, because they would exchange what they had to spare for sugar, and it would be their interest to preserve a steady market for their products, and a regular supply of sugar at steady and uniform prices.

The same course of reasoning will apply to cultivators of cotton. If their business should be destroyed, or greatly injured, by the introduction of foreign raw cotton, duty free, or at very reduced rates, from all other countries, they could no longer furnish a very valuable market for horses, mules and other productions of the Middle, Eastern and Western States, which they now require. The loss of this market would far exceed in value the amount of duty on imported raw material.

To illustrate the advantages resulting from placing manufactures by the side of producers, I will refer to the familiar case of the manufacturers of iron. We have the raw material for the most extensive manufacture of iron in the world, and the rapidly increasing consumption of iron in our country, is destined to give employment to a very great number of our male population, in digging and transporting coal, and producing iron in all its different stages of manufacture, from the pig metal to the purest steel. The men thus employed, and their families, will all be consumers of agricultural products, and of clothing of cotton, wool and leather,

thereby creating an extensive and very valuable *home market* for these articles. By thus encouraging *home industry*, we shall annually save the large amount which we should otherwise be compelled to pay to foreigners for the article of iron in its various stages of manufacture. To form some idea of the immense quantity of iron required for home consumption, I refer to the Western Journal and Civilian, published at St. Louis, for the month of October, 1853, p. 116, from which it appears that the quantity of *manufactured iron*, in the form of rails, bars, hoops, &c., shipped in the year 1846 from Liverpool to New York, Boston and Philadelphia, amounted to a fraction over twenty-seven thousand tons; and in the year 1852, from and to the same places, 168,728 tons, being more than *six times* the quantity imported in the year 1846. This very great increase of iron, imported from *one port* of Great Britain to three of the principal ports of the United States, after the adoption of the tariff of 1846, was the consequence of levying an *ad valorem duty* of only 25 per cent. on pig iron. This *form of duty* held out a strong temptation to the foreign producers of iron to invoice this article at very low rates, as thereby they would greatly diminish the duty; and by making consignments to their agents in the United States, sales could be made at such rates as to secure them valuable profits, and yet undersell American manufacturers. Thus in a few years they were enabled to break down and destroy all competition in our markets. Having accomplished this object, they found no difficulty in idemnifying themselves for small profits in past years by increasing *the price of foreign iron*, which they could now readily do, as they had no longer any serious competition from American producers of iron.

The apparent saving to American consumers by the reduction in the price of iron, under the tariff of 1846, has been far more than counterbalanced by the greatly increased price of iron, since that period occasioned by the breaking down of the iron establishments in the United States, thus leaving the foreign manufacturers free from all home competition. The price is now nearly double what it was soon after the tariff of 1846 took effect. The home manufactories of iron having been suspended very generally, these high prices will probably continue, until a general resumption of the business of manufacturing iron in the United States. But iron manufacturers will be slow to resume their business, because they know that, so long as the tariff of 1846 remains in force, they will be liable to be broken up by foreign manufacturers, resorting to the same means which proved so destructive to our iron establishments, after the adoption of the tariff of 1846. By the unwise course of our government, in levying *ad valorem*, instead of a *specific* duty on iron, our manufacturers of that article not only sustained immense losses, but were obliged to become *producers*, instead of *consumers* of agricultural products. Besides the whole

business of the country has been greatly deranged, and an immense amount of wealth sacrificed, for it is evident we have the means of making every pound of iron, in all its different forms, which the country needs, and the vast sums expended in buying railroad bar and sheet iron might have been saved.

The obvious remedy for the injury resulting from our past policy, is to levy a *specific duty* on imported iron to such an amount as will secure permanence to the home manufacture of iron, in all its branches. This protection should be so arranged as not to exclude a wholesome foreign competition. This would occasion a steadiness in the price of iron, which would prevent the consumer from being imposed upon, and the manufacturer from being borne down by the machination of foreigners.

Let such a system be adopted and *persevered in* for all time to come, and we shall in a short time, not only make all the iron we need at reasonable prices, but will build up a *home demand* for agricultural and manufacturing products of our own country, of very great value for domestic consumption, and much for exportation. The home manufacture of clothing of all kinds, blankets, carpets, &c., will be encouraged; and these will afford encouragement to the wool grower, the grazier, the producer of breadstuffs, &c., for the manufacturers of cotton cloths, woollen goods, blankets, &c., will be consumers of breadstuffs as well as the manufacturers of iron.

The extensive proportion of our country producing wheat, rye, corn, barley, oats, hemp, flax, &c., and rearing horses, mules, cattle, hogs and sheep (except wool), requires no protection, because the foreign cannot compete with the home productions of these articles, but it is of very great advantage to the producers of breadstuffs and stock to have a *home market* for them, in aid of the foreign market.

It is, therefore, the interest of that large portion of the United States engaged in the production of breadstuffs and grazing cattle, mules, &c., to contribute all in their power to the rearing up a *home market* for their productions, by affording ample protection to the producers of cotton, sugar, rice and all other products suitable to the climate of the Southern States, and also to the manufacturing establishments, in all parts of the Union, for supplying our domestic wants; and, under favorable circumstances, for exportation to foreign countries. Calm reflection upon the effects of this mutual exchange of commodities will produce conviction on the minds of all, that the interests of the whole Union will be promoted by advancing the interests and prosperity of the several parts.

III. The great extent of our territorial limit will necessarily give rise to the introduction of a great number of new States into

the Union. There will doubtless exist, in the numerous States of the confederacy, discordant interests of a local nature; but as the several States have a separate and distinct organization of legislative and judicial powers under their distinct constitutions, these local matters will all fall within State jurisdiction, and, therefore, can never give rise to collisions among the several States of the Union.

It cannot be expected, where there are such a great number of States united under one common government, that we shall, at all times, accord perfectly in our views, in relation to measures best calculated to promote the interests of the whole. In the nature of things contrariety of opinion, to some extent, will exist. This will be the case in all free governments. Unanimity of sentiment can only be looked for in despotic governments. But where every citizen is free to express his opinions upon all public measures; and where every man is entitled to free suffrage in the election of public officers, all should feel themselves bound to acquiesce in the decision of a majority, and peaceably conform thereto, until the minority shall become the majority, who may thus constitutionally reverse the decision of their predecessors. Different opinions in relation to political measures may give rise to ardent discussions, and in these discussions too much heat will be sometimes exhibited, but all must agree that these differences of views must be ultimately settled at the ballot box. There, and there only, can controverted questions be finally disposed of.

The power of the national legislature to grant incidental protection and encouragement to home manufactures, has been questioned by solemn resolutions of several of the States, among others by Virginia and South Carolina. These resolutions were adopted at a time not very favorable to calm discussion; and if we are to regard the opinions of many of the most distinguished and talented founders of the constitution, there is no just ground for complaint on this score. As early as the year 1774, at a general convention, held at Williamsburgh, Va., strong resolutions were adopted in favor of encouraging home manufactures, which received the ardent support of such men as George Washington, Thomas Jefferson, Richard Henry Lee and Peyton Randolph. (Niles' Register, 1827). Two of these distinguished men, while filling the office of President, officially recommended the adoption of measures for the encouragement of home manufactures, in accordance with the views entertained by them as far back as the year 1774. This they could not have done if they believed that there was a constitutional law to the exercise of such power under the constitution.

Where public acts are questioned on the ground that they are a violation of the constitution of the United States, the opposition to

them assumes a very grave character. And unless a conviction can be produced on the minds of a large majority of our citizens, that there is no just foundation for such constitutional objections, it may be expected that opposition to such acts will be continued, and consequently the public peace endangered. In such a state of things, it would be wise to abandon measures of doubtful constitutionality, rather than endanger the public peace and the security of the Union. But if calm discussion and examination of the grounds on which public measures are challenged, because of their being unconstitutional, should produce a very general conviction that there is no just ground for such objection, and if moreover the competent judicial tribunals shall hold such acts to be constitutional, then it would be the obvious duty of the minority to yield their opinions and acquiesce in the decision of the majority.

The opinions of such men as Washington and Jefferson, who were members of the convention by which the constitution was framed, expressed at a time when party politics could have had no influence on their minds, is entitled to very great weight.

Prior to the adoption of the constitution of the United States, the individual States alone possessed the power of giving encouragement to home manufactures, by levying duties upon foreign imports, but this power was yielded up to the United States by the federal constitution. If then the *power* to protect *home industry* by levying discriminating duties on foreign imports cannot be exercised by the national government, *it is extinct.* It is impossible that the convention should have framed a constitution thus obviously defective.

It would be a strange anomaly, indeed, if neither the State nor National Government in our great and widely extended country should possess the power to *protect and encourage home manufactures*, by levying discriminating duties upon foreign importations.

(To be continued.)

ARTICLE III.

Valley of the Ohio.

BY MANN BUTLER, ESQ.

Continued from page 186, vol. XIII. No. 3.

Extenuations for the Moravian massacre; Fort Pitt surrendered by Virginia to Pennsylvania, 1780*; Boundary between the two States not finally settled till* 1788*; Crawford's expedition against the Indians on the Sandusky river; Battle; Retreat; Disorder; Capture of Col. Crawford and Dr. Knight; Torture and burning to death of Crawford; Land system of Virginia.*

Gladly does the author turn from an enormity which makes him blush to own its authors, as fellow countrymen, to some of the circumstances which may, in some slight degree, alleviate, though nothing can justify a transaction so utterly at war with justice and mercy and all the professed principles of sympathy of the American people for the children of the forest. In the first place, "very few of our men imbued their hands in the blood of the Moravians, even those who had not voted for saving their lives, retired from the scene of slaughter with horror and disgust." Still they were accessaries to the foul massacre by their dastardly inactivity. In such a case of high, momentous principle, he who is not for it, is against it. There is no medium, no middle ground, in such extremities between crime and innocence; there, backwardness and neutrality become the highest guilt.

Next the country in which this expedition originated, was a debateable land claimed by Pennsylvania and Virginia, and had become the theatre of many disorders. The reins of government never held very tight on a wild frontier, were more than usually loose in this territory. The boundary between the two States claiming this tract of country, although agreed upon by commissioners of both States, at Baltimore, on the 31st of August, 1779, was not ratified by Virginia till the 23d June, 1780; and by Pennsylvania not till 23d September, 1780. It was not finally extended until May, 1785.* To this slight extenuation of the outrage, but still not of its accompanying treachery, must be added the fact that there were circumstances calculated to implicate the Moravians in the exasperating and heart-rending ravages of a savage enemy. These had filled the hearts of the people with bitterness; many of the soldiers were men who had recently lost relatives by the hands

* Craig's Pittsburg.

of the savages. Several of them had found in the cabins of the Moravians articles which had been plundered from their own houses. One man, it is said, found the clothes of his wife and children, who had been killed a few days before by the Indians. They were still bloody; yet there was no certain evidence that these Moravians had any direct agency in these fruits of barbarous warfare. "Whatever of our property was found with them, had been left by the warriors in exchange for the provisions which they took with them."*

One certain proof of the innocence of the Moravians is found in the fact that, "when attacked by our people, although they might have defended themselves, they did *not*. They never fired a single shot. They were prisoners, and had been promised protection, and every dictate of justice and humanity required that their lives should be spared."†

No doubt the frontier was festering with the wounds of Indian barbarity; no doubt its authors were not thought entitled to the mercy they had never shown to others; no doubt that all distinctions of friendly and Christian Indians from their hostile fellow red skins were disbelieved and disregarded. Still, there are but slight extenuations which admit the truth of a transaction, and brands its perpetrators with indelible infamy and wickedness.‡

There was impending over a portion of the people involved in perpetrating the bloody proceedings against the Moravian Indians just related—a retaliation deep and fierce for their perfidious cruelty. It followed another expedition which was intended for the further Moravian towns on the Sandusky river.

On the 25th of May, 1782, 480 men mustered at the old Mingo towns, on the northwestern side of the Ohio,‖ and elected Col. Wm. Crawford, who had been an officer of high character in the continental service, as their commander.

This party may be considered a continuation of the infamous campaign which had destroyed the Moravian Indians, under circumstances of aggravated barbarity. It set off with a determination of indiscriminate massacre, "no quarter was to be given to

* Doddridge.

† Idem.

‡ Western Messenger, Louisville. 1837, p. 257. Destruction of the Moravian Towns, by the author.

‖ About forty miles below Pittsburg by land, and seventy-five by water. Dr. Metcalf's Narrative, in Metcalf's Collection.

any Indian whether man, woman or child."* Such were the very words of the written invitations to volunteer on this expedition.† The expedition set forward on Williamson's trail, [as the route pursued by that officer was called,] until the party reached the upper Moravian town. Here the troops refreshed their horses with the corn yet hanging on the stalks, which had been raised by the unfortunate people, who had been harried both by Indians and whites at these towns. Shortly after leaving this point, two Indians were discovered by a reconnoitering party. They were immediately fired upon without effect. So soon as the alarm of this firing reached the camp, more than half of the men rushed out, and without any command and in the most tumultuous manner, to see what had happened. An ominous indication of future behavior, which justly filled the mind of the commanding officer with gloomy apprehensions for the result of a serious conflict with the enemy. Nothing however material happened till the 6th of June, 1782; when the troops reached the site of the Moravian town "on one of the upper branches of the Sandusky river."‡ It was no longer inhabited; the high grass waved over the place, and the ruins of a few huts alone pointed out that the spot had been the abode of human beings. Its former tenants, fortunately in some degree for the character of our people and their own safety, had removed to the banks of the Scioto.

Disappointed in this first object of the expedition, a council of officers was held, by which it was determined, "to march one day longer in the direction of Upper Sandusky, and if they could not reach the town in the course of the day, to make a retreat with all speed. The expedition continued on its course until about 2 o'clock the next day, when the advance guard was attacked and driven in by the Indians, who were discovered in great numbers in the high grass with which the place was covered.‖" The enemy were endeavoring to reach a piece of wood, in the midst of an extensive prairie, when they were discovered, and anticipated in this movement by a rapid march of our troops. An attempt was then made

* Doddridge. 270.

† Heckewelder says in his Narrative, page 342, that the Indians knew this determination, which was but in conformity with their own barbarity; their spies who were constantly abroad, having found it written with coal upon the peeled and blazed trees of the camp near the Ohio. All such writings they copied, and took to some one who could read them.

‡ Doddridge, 270.

‖ Idem.

by the Indians to occupy a copse on the right of our men; but they were prevented by a gallant charge of the right wing, under Major Leet. The battle now raged throughout the line until dark, but with little effect, if the numbers killed on our side is any criterion, for they are said not to have exceeded three, with twenty-three wounded. Both parties lay upon their arms during the night; both adopted the policy of kindling large fires in their front, and then retiring some distance in their rear, to avoid being surprised by a night attack. Our men continued to occupy the battle ground the next day without interruption from the enemy who were hourly increasing in numbers. A retreat was now resolved upon, as the only means of saving the troops; it was ordered for the ensuing night. The enemy seemed to have penetrated this design, as about sun down they commenced a furious attack on every side, except that which led deeper into the wilderness towards Lower Sandusky. The line of march was taken up in this direction as the only open one; but after having marched about a mile on this course, the troops were wheeled to the left, and recovered their former trail before day-break. The march was hurried the next day without much annoyance from the Indians; notwithstanding the most culpable negligence in not keeping out guards against surprise. The numbers who composed the main body amounted to about 300 men; they effected their retreat to the settlements with safety, if not in triumph, which could with difficulty be desired by the friends of humanity.

Very different was the fate of those who had wandered from the main body, with the vain hope of escaping the pursuit of the enemy engrossed as they thought by the principal body. These were the object of the ceaseless vigilance of the Indians; and few escaped their incessant exertions, except a body of forty that broke through the Indian line, and with some loss overtook the large body of retreating troops. The enemy spread his parties from Sandusky to the Ohio, killing one man near the site of the present town of St. Clairsville. The privations and sufferings of some of the fugitives who did escape, and the torments of those who fell into the hands of the enemy, present some of the most pathetic instances of the hardships and horrors of frontier life.

Of these none is more worthy of commiseration for the agonies inflicted, the worth of the victim, and the heroic fortitude with which he bore his sufferings, than the case of Col. Crawford, the

commander of this unfortunate expedition. At the commencement of the retreat, which had been determined on, the Colonel placed himself at the head of the troops; but he had not proceeded far, when missing his son, his son-in-law, and two nephews, he stopped and called their names as the line of troops passed him; but they were not be found. After the body of troops had passed away, the failure of his horse prevented the Colonel from rejoining it. He then fell back with Doctor Knight, the surgeon of the expedition,* who continued with the Colonel, at his particular request. The party toiled on, slowly overtaking other luckless officers disabled by wounds from traveling, but with the utmost pain and difficulty. In this embarrassed condition they were surprised by a party of Indians, and taken back prisoners to Sandusky.

On their arrival at this place, mournfully depressed by the butchery of nine prisoners, on their route, five of whom were tomahawked before the eyes of the Colonel and Doctor, by the squaws and boys; they found a fire kindled—dreadful token of thsir own fate. "When we were come to the fire," says Dr. Knight, "the Colonel was stripped naked, ordered to sit down by the fire, and they [the Indians] beat him with sticks and their fists. Presently after I [Dr. Knight] was treated in the same manner. They then tied a rope to the foot of a post about fifteen feet high, bound his hands behind his back, and fastened the rope to the ligature between his wrists. The rope was long enough either for him to sit down, or walk round the post once or twice, and return the same way. The Colonel then called to *Simon Girty*, the renegade white man, asked if they intended to burn him. Girty answered, yes. The Colonel said, he would take it all patiently. Upon this, Captain Pipe, a Delaware chief, made a speech to the Indians consisting of about thirty or forty men and sixty or seventy squaws and boys. When this speech was finished, they all yelled a hideous and hearty assent to what had been said. The Indians then took up their guns, and shot powder into the Colonel's body from his feet up to his neck. I think not less than seventy loads were discharged upon his naked body. They then crowded upon him, and to my best observation, cut off his ears. When the crowd had dispersed a little, I saw the blood trickling from both sides of his head. The fire was six or seven yards from the post to which the Colonel was

* Now (1836,) of Shelby County, Kentucky, and father of Doctor Knight, of Louisville.

tied; it was made of small hickory poles burnt quite through in the middle, each end of the poles remaining about six feet in length. Three or four Indians by turns would take up individually one of these burning pieces of wood, and apply it to his naked body already burnt black with powder. These tormentors presented themselves on every side of him, so that on which ever way he ran round the post, they met him with the burning fagots and poles. Some of the squaws took broad boards upon which they put a quantity of burning coals and hot embers, and threw on him; so that in a short time he had nothing to tread on but coals of fire and hot ashes to walk upon.

In the midst of these extreme tortures he called to Simon Girty and begged to be shot; Girty not answering, he called to him again. Girty then by way of derision said he had no gun, at the same time turning about to an Indian who was behind him, laughed heartily, and by all his gestures seemed delighted at the horrid scene. Col. Crawford at this period of his sufferings, besought the Almighty to have mercy on his soul, spoke very low, and bore his torments with the most manly fortitude. He continued in all the extremities of pain, for an hour and three quarters, or two hours longer, as near as I can judge, when at last, being almost spent, he lay down on his belly, they then scalped him, and repeatedly threw the scalp in my face, telling me that was my great captain. An old squaw then got a board, took a parcel of coals and ashes, and laid them on his back and head, after he had been *scalped;* he then raised himself on his feet and began to walk round the post; they then put a burning stick to him as usual, but he seemed more insensible of pain than before." Dr. Knight was then led away, and the next which is heard of Col. Crawford is, that on the Doctor's way to a Shawanese town, to endure the same demoniac tortures, he "came to the spot where he had been burned;"* and "saw his bones lying amongst the remains of the fire almost burned to ashes." The Indian who had the Doctor in charge for the same dreadful fate, told him that it was his big captain, and gave the scalp halloo.†

Does not the thought instantly rise in the mind after reading such barbarities, that a state of society which so far from containing any principle of resistance to such enormities, could foster

* Metcalf's Collection, 46, 47.

† Idem.

them, as the ordinary military amusements of the people, ought to be suppressed, at the hazard of all consequences. If civilized States have too often exhibited scenes of merciless barbarity, they have been the occasional perversion of their ordinary humanity, rather than as in Indian and barbarous society, the very spirit of its institutions. In this light, no lover of man's happiness and freedom from the ferocities of life, ought to regret the extinction of barbarous society; or the means necessary to effect so essential a reformation among the wild tribes of America, or any other part of the globe. The same principles that consecrate the spread of civilization over the barbarous hordes of the Eastern continent, justify the establishment of the white man in the hunting grounds of the Indian savage; even at the expense of the horrible carnage which has brought about these glorious results. Such are the paramount claims of civilization, religion, freedom and intelligence above the barbarity and degradation of savage life, that it should be the prayer and ardent effort of every true admirer of the dignity, the usefulness and grandeur of the human race, that it should dissappear from the face of the globe.

Nor have our countrymen exerted a dominion over the Indian, as severe as that which displaced or conquered the barbarism of the Gaul, the Celt, or the German of ancient Europe, or the Tartar of modern Russia. Everywhere has divine benevolence decreed that the barbarian shall give way to the civilized man—barbarousness to civilization for the most glorious improvement of our race. In effecting this goodly work, it behooves all men called upon by their position and condition of life, to execute this divine decree as it is meant by Divine Goodness to be done—to do justice in mercy—to employ every alleviation in their power consistent with the extinction of the ferocious customs of savage man.

During the comparative exemption from Indian hostilities, the energies of Kentucky were now principally directed to the acquisition of land. This was particularly facilitated by the arrival of Col. Thomas Marshall and Geo. May, the surveyors for the new counties of Fayette and Jefferson, which had been formed out of the primitive county of Kentucky. These gentlemen opened their offices late in November, 1782, having been delayed by the expedition under Gen. Clark, of that year. One office was opened at Lexington, and another at Coxe's Station, in Jefferson County.

Now commenced that scramble for land, which has distressed

and disabled society in Kentucky almost as calamitously as pestilence or famine. The original source of this misfortune was issuing warrants for quantities of land without boundaries, to be surveyed under private direction, instead of its being done by public authority previous to any location by the purchaser. Could the public lands of Virginia have been delayed in their sale and survey, until they could have been laid off by public appointment, how happily might the claims of her regular soldiers have been satisfied, as well as those of her irregular though scarcely less useless pioneers in another field of public service. The residue might have been snatched from the speculator, and offered in open market, for the benefit of the treasury. If so much land would not have been sold [which never should,] more indeed than the State actually possessed, it might have commanded a higher price, and thus have netted more in reality to her public finances. But other counsels prevailed, and Kentucky was laid open to the conflicting claims of innumerable locators and surveyors on the same ground, till they produced a labyrinth of legal perplexities, through which it became necessary to pursue the landed estate of the country, and to place it in a state of certainty and security. It is not known to the author what States besides those of New England made their sales of land according to previous public surveys. This system was adopted by the Old Congress on the 20th of May, 1788; and has with numerous and most popular improvements been wisely observed to this day. This subject will present itself again.

Article IV.

From the Mining Magazine.

American Geology.*

American Geology, as such, has hitherto had no exponent, unless it is to be found in the work whose title is placed below. That it is there investigated, it will not be necessary for the reader to enter far in its pages to satisfy himself, or to become convinced

* American Geology, containing a statement of the principles of the science, with full illustrations of the characteristic American fossils. To be published in four parts, with an Atlas and a Geological Map of the United States. Ebenezer Emnons. Part I. 8vo. pp. 194. Albany: Gray & Sprague, and J. Munsell.

that he has in his hands an able work containing novel views of a new subject, or perhaps it would be more proper to say, new and independent views of a great subject. The author writes like an able and independent thinker, fearless in expressing his views from a consciousness of innate ability to maintain them. He asks not for authorities, but seeks facts. He leans upon no theories, nor fortifies himself with any opinions unless they are sustained by the senses. It is this method of entering upon the investigation of American Geology, this disregard of anything like aristocracy in science, which we like, and the result is that we have a more clear and satisfactory statement of the principles of this science in the abstract, together with an exposition of it, than is to be found in any other of the numerous volumes issued from the press.

The work itself, of which the first part has just been issued, is published in a style unequalled by any scientific American work. The paper is no whit inferior to the best style of European books, and the execution is worthy of it.—The embellishments or illustrations, which have been executed on wood, stone, and steel, are among the very best of their kind. It truly affords a pleasing satisfaction to see that the value of such a style of publication is appreciated, and to know that the public taste of the day has compelled publishers very extensively to resort to the best skill and materials of their trade.

This undertaking is introduced to the public not with any extensive or explanatory preface, by way of an apology for doing what should always be fearlessly done, but with a few sentences, modestly entitled, "Proposals," which are briefly as follows :—

"The American Geology will be published in four or five parts, each of which will be illustrated by appropriate wood-cuts. Each part will contain about two hundred pages of letter-press. The paper and press-work of the present part shows what the mechanical execution will be.

"The fossils will be executed on stone and steel by the best artists, and no expense will be spared to make the work complete. The present part, it will be observed, contains a fine illustration of the moon's surface, on stone, by Swinton, and a quarto plate, on steel, by our distinguished engraver, J. E. Gavit. The plates of fossils will be distributed with each part, but numbered for binding together in a uniform style with the geological map when the work is complete.

"I have no design to find fault with or disparage the works that have been published by our geologists, still it cannot fail to be observed that they are not American. We want an American Geology, and all necessary means will be employed to accomplish the purpose I have proposed.

"E. E."

The preliminary remarks with which the work commences, are devoted strictly to the science of geology, and notice such points as are necessary to be understood, as lying at its base, and as exerting an influence throughout all its investigations. This is a part of a scientific method, and, likewise, indispensable for those less familiar with the general subject, at the same time it affords the ground for the distinctive features of every treatise. There may be many who will dissent from some positions of the author, but we doubt if they can combat them with better sense or more forcible logic. Take the doctrine of progressive development for instance :—

The life of plants and animals is controlled by a single element; that is, oxygen. The adaptation of organs is in accordance with its properties. It has always been so. We presume, too, that its supply has been constant—that there has been no period when its quantity was either greater or less than it is now. A different view is not sustained by the fact that at one period huge lizards predominated in its fauna, for analogy proves that this class would have perished with a less proportion than that which exists in our atmosphere at the present time.

In cases of this kind, reasoning from special structural affinities to general physical conditions is not always safe. The lias and oolitic periods abound in the remains of cold-blooded animals, whose respiratory apparatus was undoubtedly imperfect, like the lizards of the present. It is a favorite inference with a certain class of the progressive geologists, that the oxygen of the atmosphere at that period was less in proportion to its mass than it is now. But then may we not inquire, if there was less oxygen in the present atmosphere than there actually is, could the menbranous reptile lung supply the demands of the system; and is not the constituent proportion of oxygen the quantity required to give the creature the power to breathe at all? I say it is not always safe to reason from structural affinity to physical conditions. If we take any other organ, as the eye, and draw from its structure and condition analogous inferences concerning the quantity of light, we may see where it will lead us. A class of progressive geologists, maintaining that in the early periods of life the light of the globe was dim, and that but few rays shone through the hazy atmosphere, find in support of this doctrine the fossil remains of a fish or a lizard with enormous eye sockets. He believes that the large eye was adapted to a dim state of the atmosphere. Another person finds a fossil with very small bony sockets. In this case, too, it may be said the eye was very small, and hence it was adapted to an exceeding intense light—to the sun when it shone fiercely from its throne in the heavens. But again, a fossil is found entirely destitute of an eye socket, and not a vestige of an organ of vision can be found; hence, there was a time when the earth was shrouded in darkness, for in darkness animals have no need of eyes, and light would be useless to animals destitute of the visual organ. But then we find all these states of the eye in the present arrangements for supplying the world with light. The Pomatomus telescopium, a fish of the Mediterranean, which lives in very

deep water, has a remarkably large eye. It is the position which it occupies that requires the large eye, and that large eye is adapted to its abode; and if only one-half of the light of the sun was extinguished, it probably would be unable to see at all. And just so with the reptile, if one-half of the oxygen of the atmosphere was withdrawn from it, all reptiles would die. The mole has a very small eye, but that small eye would be of no use if the ground was lighted by fewer rays. The blind fish and the blind animal of the mammoth cave live in a period when the earth is lighted up most gloriously: their abodes are dark, but yet the sun shines without in all its strength. We find, then, all conditions of the eye and the lungs at the present time. But it does not follow, that because the structure of the fossils of a given period may be found whose organs belong to a certain type, that the physical conditions of the earth were materially different from what they are now. This view of the subject does not conflict with the doctrine of adaptation, but rather sustains it. The physical conditions are first established; the organic kingdoms afterwards come in with their separate adaptations. The organisms are perfect in their adaptation to the conditions in which they are to live, as well as to the position in space, and the mediums in which they are to be placed. The doctrine of progressive development, as usually represented, seems to be untrue. It proceeds on the ground that the earliest beings were the least perfect, and that progression consisted in the creation of those animals which were more perfect in their structures than their predecessors. But who cannot see that the world is full of the same imperfections in animals now as in the beginning. Progression has no reference to perfection of structure, but to rank. Structures have been always perfect, but rank has been progressive.

The nomenclature adopted in this work contains some decided improvements; there is, however, room for more, which we hope to see at some day introduced. As here presented, it is clear and comprehensive. The rocks called *metamorphic* or *azoic* are not recognized as classes, or even subdivisions of sections, inasmuch as they have no special peculiarities which make them applicable for such purposes. Metamorphism occurs, or may occur, in all the series of rocks from the earliest to the latest sediments. It is true that the term metamorphic has been confined to gneiss, mica slate, hornblende, talcose slate, &c.; but its use is theoretical, and was thus applied on the hypothesis that those rocks are altered sediments, of which there is no evidence. The term *azoic* presupposes that our observations have made certain that which from the nature of our evidence must ever remain doubtful. There is no doubt but that granite gneiss, mica slate, &c., are azoic, but no one would think it proper to apply it to those rocks. The following is the nomenclature adopted:—

CLASSIFICATION.

			Stratified.
III. Hydroplastic,		c. *Kainozoic,*	Alluvial and drift, Pleistocene, Pliocene, Meiocene, Eocene.
		b. *Mesozoic,*	Cretaceous, Lias and Oolite, Trias.
		a. *Palæozoic,*	Permian, Carboniferous, Devonian, Silurian, Taconic.
II. Pyroplastic,	b. *Sub ærial,*		Lavas, Tufa, or Volcanic Products.
	a. *Sub marine,*		Greenstone, Porphyry, Basalt, Trap.
I. Pyrocrystalline,		b. *Laminated,*	Gneiss, Mica, Slate, Hornblende, Talcose Slate, &c. Laminated Limestone, Laminated Serpentine.
		a. *Massive,*	Granite Sienite, Hypenthene Rock, Pyrocrystalline, Limestone, Serpentine Rensselaerite, Octahedral Iron Ore.

The remainder of Part I. is devoted to descriptions of the rocks, commencing with the Pyrocrystalline, and closing with the Pyroplastic, as they are developed in this country. There are many interesting points here, to which we would like to bestow, at least, a passing notice, but must refer the reader to the work itself, with accompanying illustrations. The latter portion of this Part is devoted to the subject of mining, &c., embracing nearly sixty pages, and to this portion we shall confine our further remarks.

The term "mining," in the comprehensive sense here used, is treated of under the following heads.

1. The theory of the formation of those depositories which contain the metals and ores.
2. The structure of those depositories.
3. The changes which the mineral undergoes in depth.
4. The best modes for extracting their metals and ores, including those which have been devised for raising blocks of rock from their beds.
5. The expense attendant upon different kinds of work in mining and quarrying.
6. The value of the products of mining.

In the explanation of the theory of the formation of those depositories which contain ores, there is much which is of interest, of which, however, we can only take a passage or two:—

In the first place, we must look upon all the repositories of the ores and metals as ancient arrangements, by which they are made accessible to us; and that those arrangements are the necessary result of the constitution of the globe. They are by no means to be regarded as accidents, arising from conditions which might have been otherwise. They, too, are general results, confined to no limited scale; and when the forces and plan were determined, upon which to form and fashion

the earth, the results of which I have spoken became an essential part of those causes, and it would have required special instrumentalities to have prevented their operation just as we now see them to have operated. It is for this reason that the formation of repositories for the metals has been controlled by law, by which certain constants may always be looked for. This being the case, the miner has not overlooked the plainest of these results, but is constantly referring to them in his operations with confidence.

It is not necessary that we should connect these laws with the early conditions of the globe in order to understand them; but as facts it is proper that they should be borne in mind. What was that original condition, then, which gave birth to the repositories of the metals? It was that incandescent state of the crust of the globe, of which I have already had occasion to speak. We have no occasion now to inquire what gave birth to that incandescent state; the fact is attested in the phenomena everywhere visible in those portions of the earth's crust which belong to its earliest epoch. The most important effect of this state is the expansion of the crust, or the occupation of a larger space for the time being. But the earth, situated in space, and in a colder medium than itself, has necessarily lost that primitive heat which belonged to its earlier stage of existence. It has cooled, and the most important result which interests mining is the consequent contraction of the cooled part. Contraction has severed the bonds of the continuity of the strata; and those fractures which are the result of the cooling process have been made in comparatively straight lines, or in given directions; or we may regard the causes of fractures simply as subterranean, but due to general conditions, and which must necessarily affect the whole of the cooling envelope.

The fact that fissures may be, and probably are thus formed, is agreeable to all that is known of cooling bodies; and observation which has been directed to those fissures proves, in the general at least, that the fissures are made in lines of bearing quite constant. We may not infer that a mechanical force is applied beneath a stratum, and has erupted those strata in the lines I have spoken, as a previous step in the formation of a vein. A cooling state has given rise to a state of tension, which increases in the direct ratio of the diminution of temperature, which is finally too great to be borne, when the continuity is broken. It is true that a subterranean force is often operative in the mode represented, and by which strata are uplifted and fractured; but it is more consonant to facts to suppose that vein fissures are the result of cooling and the great tension which arises therefrom. As a general rule, the direction which a fissure has taken was in a line of the weakest part of the stratum; but it is easy to conceive that a greater strain may be made upon a stronger part, so as to form a fracture in a line which is apparently along the strongest part of the stratum. In crystalline rocks the planes of lamination must be regarded as weaker planes, and hence it is that a very large proportion of our veins of magnetic iron lie along those planes.

The continuity and persistence of veins is an important subject to the miner, relative to which our author says:—

The expenditure of capital in mining is warranted only where there is a good degree of assurance of the persistence of the vein in a down-

ward direction. While it must be admitted that each particular case should have its own evidence of its continuity, still that evidence is based on general facts and principles. We refer in the first place to the theoretical views we have offered relative to the origin and formation of veins. If that theory is sustained by observation, we are carried a great way towards a satisfactory establishment of a persistence of veins in a downward direction, subject, however, to an interruption, it may be by the operation of local causes, which may have deranged or interrupted the formation of the vein fissure. We may not however, neglect the teaching of facts as they are being furnished by the workings of the oldest mines. To the mining records of other countries, where it has been the business for centuries, we may refer with great sasisfaction. The veins in the mining district of Cornwall, England, have been pursued successfully to the depth of 1,800 feet. It was thought by one class of geologists that they had become less rich at the depth of 600 to 1,200 feet; still they appear to retain their richness to-day, with very little or no abatement, to the depth of nearly 2,000 feet. There are still deeper mines in the districts of the Hartz mountains. Those of Clausthal and Zellerthal have been pursued to the depth of 1,920 feet. Those in the district of Andreasberg, 2,400 feet. In the neighborhood of Freiberg, Saxony, the mines have been worked to the depth of 1,800 feet. The Mexican silver mines have been explored to the depth of 1,500 or 1,600 feet; and the quicksilver mines of Almaden, in Spain, have sustained their richness beyond the depth of 900 feet.

The continuity of veins in the direction of their strike has not been determined with exactitude. Some of the veins of Freiberg are known to extend in length from 12,000 to 24,000 feet. Another is known to extend 36,000. But in the direction of their strike or bearing, there is a great variation in their condition. An auriferous vein of quartz in Maryland, extended only twenty or twenty-four feet in its line of bearing, plunging down at each extremity on a rapid slope; and yet there is little doubt that its depth continuously is as great as any of the auriferous veins of our country, whose line of bearing may be traced for one or two miles. The records of mining furnish many curious as well as interesting facts. Veins are often explored for several years without returning a compensation for the labor and expense incurred, when they are abandoned. After many years of rest, an enterprising miner or capitalist, who is acquainted with the history of its former working, having faith in its value, re-opens the mine, and pursues it with great success. Occurrences of this kind are common in all mining countries. They show, in the first place, what superior skill may accomplish; or, indeed, the subsequent success may have arisen, not so much from superior skill in working, as from having opened a richer part of the mine. All experience in mining proves that the wealth of a mine is variable; some zones are rich, while others are comparatively poor; and this fact is one which should be universally known; it is one which the capitalist should be prepared to meet in any mine, however rich it may be at certain points of exploration. This remark is applicable to veins of lead, copper, silver, and gold, rather than of iron.

The structure of mineral veins, together with the kinds of veinstone which contain the ores or metals; indications of a good or bad vein judged of by the character of its walls; changes which a vein undergoes near the surface; character of some of the metalliferous veins of this country; limonite or hematitic ores of iron; the gold-bearing rocks of the United States; changes which take place in the auriferous veins of sulphurets of copper and iron in depth, the geological position and relation of gold; comparative richness of the upper and deeper parts of the vein; direction of the auriferous veins; age of the auriferous veins of North Carolina; age of the gold-bearing rocks of the country; distribution and extent of the auriferous rocks east of the Mississippi Valley; of the pyrites and auriferous copper lodes of the Atlantic slope. Such are the titles of many of the subjects subsequently treated of. We pass over all of them to find a place for the annexed important practical consideration:—

ON THE EXPENSES ATTENDING MINING OPERATIONS.

It is scarcely necessary to observe, that the expense of working a mine must depend upon a variety of circumstances, and that the estimate of those expenses which will probably accrue in the working of any given mine, will not be applicable to any other, though the actual amount of metal may be the same in each.

In some cases a work may be prosecuted successfully without the aid of gunpowder; in others the hardness of rock may become excessive at certain depths, and trap dikes may cut off a lode, and hence heavy expenses will be incurred in recovering it. Variability in the herdness of rocks is one of the principal causes of the difference of expense in working mines which belong to the same rock or formation.

Mining operations embrace three kinds of work—shafting, tunnelling, and stoping. Shafts are right-angular cuts into the soil and rock, in which respect they differ from wells. They may be perpendicular or inclined. They are necessarily perpendicular if the lode is vertical; they may be inclined and sink upon an inclined lode to great advantage by employing a proper apparatus for elevating the mineral. But they are more frequently vertical, and sunk at a distance from the outcrop of the vein, so as to intersect it at any given depth which may be desirable. To do this, it is necessary to ascertain in what direction and how much the vein dips, or, in other words, how many feet the vein makes on the dip side in any given number of vertical feet. Thus, a vein may make to the west seven feet horizontally in seventeen vertical feet. It is easy from these facts to calculate how far west from the outcrop the shaft must be sunk to intersect the vein at one hundred or two hundred feet; and so of any other ratio which the vertical plain may bear to the inclined one. It is to be borne in mind, that a very flat vein, as has been already observed, will become steeper as it descends. In very flat veins, therefore, calculations of this kind cannot be relied upon until the vein has reached its maximum dip.

Tunnels or drifts are horizontal cuts into the earth or rocks. They may be designed both for conveying outwards the mineral and for drainage. In that case they are made from the outside, or begin on a slope and are worked inwards, or they may proceed from a shaft to a lode which lies upon one side of it.

Stoping is a term applied to that kind of work by which the vein or its metal is removed from its bed. The most economical way is to stope from beneath upwards. The dead rock is readily disposed of, and placed so as to save the expense of raising it to the surface, and at the same time aid in supporting the walls. The arrangements for stoping should be such that several gangs of miners may be employed in taking down the vein at different levels at the same time. In this case they will be arranged generally in a series of steps, one above another. The cost of a shaft, seven feet by five and sixty feet deep, will not be less than two dollars and a half per foot. If sunk to one hundred feet, it will not be less than four dollars per foot. A windlass will answer for the purpose of raising rock and earth for the first sixty feet, but a whimsey, or whim, is more economical below that depth. The apparatus for raising the rock and water, however, must depend very much upon circumstances. If it is a trial shaft merely, and the vein is of doubtful character, it will not be prudent to incur the expense of a whimsey until after the vein has been proved to a certain extent.

Other expenses are incurred in mining operations before the mineral is ready for smelting besides those which attend the shafting, tunnelling, and stoping. Almost all ores require roasting in order to fit them for stamping. There are, therefore, three operations at least to which the ore must be subjected to fit it for smelting, viz.: assorting, roasting, and stamping or crushing. Passing by the expense of assorting, as this must be the most variable of the three, and cannot be calculated before trial, I proceed to state the expense of roasting and crushing a given amount of iron ore. The roasting is performed in kilns of a simple construction.

One kiln, containing 107 tons of ore, will cost:

1.	For mining, fifty cents per ton	$53.50
2.	Five cords of wood, two dollars per cord	10.00
3.	Teaming one hundred rods	11.50
4.	Labor for filling the kiln	16.00

In the case of iron, there is usually the expense of separating the rock from the ore, which is effected either by magnets or by washing. If the first method is adopted, the expense will amount to

1.	6 men, $2\frac{3}{4}$ days in crushing, one dollar per day				$16.50
2.	1 engineer, $2\frac{3}{4}$ days, at $2.00 per day,				
3.	1 assistant, 1	"	1.50	"	
4.	1 machinist,	"	2.50	"	
5.	1 man,	"	1.25	"	
6.	3 men,	"	1.00	"	
7.	1 boy,	"	50	"	40.42
8.	10 cords of wood for engine				20.00
	Total cost,*				$167.92

* Sandford mine, Essex county, New York, Lot 21.

There will also be a loss of ten tons in shrinkage, which will leave only ninety-seven tons of ore after it has passed through the several operations.

As separated ore is now selling, this will be worth..... $253.00
Phosphate of lime saved, worth..... .... 125.00

The allowance for loss in separating by water is about twelve tons per one hundred.

VALUE OF MINING IN CERTAIN STATES OF THE UNION.

The country is not wanting in a class of persons who decry mining enterprises, and pronounce all attempts for developing its mineral wealth schemes more fraught with expectation than with reasonable prospects of fruition. This class, though wealthy, never invest their means or their money in mines.

There is another class who may be equally unbelieving in the real value of mineral property, yet are ready to plunge into any scheme or project in which there is enough to make a bubble—something which may be inflated into consequence. This class of men have little to lose, and being reckless in representation, are ready to avail themselves of such arts as are necessary to advance their unrighteous schemes.

There is also a third class, who look at matters in a different light. They are satisfied that there are valuable mines, and, moreover, they look at the world as progressing in the arts, and requiring every day for its progress the wealth which is concealed, except to the eye of science, in the bowels of the earth. They see that, for years to come, the increased wealth of the nation is to be drawn from this great store house. They are disposed to invest their money in this kind of property, and to be content with the fair gains of the business. They are aware that it is not without its risks, but to diminish them resort to all the means which may be necessary, in each particular case, to secure a successful result.

The course pursued by the second class has been so notorious as to give character to mining enterprises, and to invest them with a suspicious appearance.

I have not space, however, to follow up this subject. My principal object now is to state very briefly the value of some kinds of the mining property of our country, for the purpose of placing the subject in a prominent light, and thereby show that it is for its interest to foster and encourage all mineral enterprises which are undertaken in a proper spirit.

The time is not far distant when mining will form one of the great industrial pursuits of the country. Every blow of the pick, and every gunpowder blast, will add their farthings to the common wealth of the nation, for every pound of copper or iron is a real addition to its resources.

1. Northern New York. The net proceeds per annum, which may be realized from the ores of iron in Northern New York, will pay the interest, at seven per cent., on $3,000.000.

The mines at Adirondack have just been sold for $500,000, a sum much below their real value. The Sandford ore bed, in Essex county, cannot be estimated at much less than $500,000. At this mine,

from two pits alone, twenty-one and twenty-three thousand two hundred tons of ore per day have been raised, at a cost not exceeding fifty cents per ton; and which, when crushed and separated, yields from five to fifteen tons of phosphate of lime per one hundred tons of ore, which is worth on the ground twenty dollars per ton, and twenty-five to thirty dollars in New York.

There remain the Clintonville and the Saranac iron districts, together with inexhaustible quantities of the specular ore in Jefferson and St. Lawrence counties, and the magnetic ores of the Highlands.

2. Pennsylvania furnishes an amount of iron which may be estimated at $5,000,000 annually.

3. Missouri, from the Pilot Knob and Iron mountain, is capable of furnishing as much iron as any part of the world. Situated in the great valley of the Mississippi, its value can scarcely be overrated.

4. The iron mountains of Lake Superior are equally as rich as Northern New York. There are some, perhaps, who may regard this comparison as unjust to Lake Superior; but it must not be forgotten that one mine, the Sandford Lake mine, is between six and seven hundred feet thick. A square yard of ore weighs four tons.

5. Maryland, Virginia, and North Carolina possess inexhaustible supplies of iron ore, which are mostly the hydrous peroxides of iron. The hematites of Vermont, Eastern New York, are very extensive.

6. The brown ores of iron in the south-western counties of North Carolina, and in Eastern Tennessee, are immense.

A mineral so important as iron should be widely distributed, and it appears that, in the United States, every important section is supplied with it. The largest section or formations which are destitute of the ores of iron and of the metals are the Cretaceous and Tertiary, which skirt the Atlantic coast, and which form our great basins and valleys. So, also, the Silurian and Devonian systems are in a great measure destitute of iron ores, with the exception of the argillaceous and oolite ores of iron of the Clinton group.

7. I have already spoken of the value of the lead ores of Wisconsin, Missouri, and Iowa. The highest estimate which I have noticed of the probable productive capacities of the lead region is from one hundred to one hundred and fifty millions of pounds annually, having already reached that of fifty millions under unfavorable circumstances.

8. The production of copper is in its infancy. It is too early to attempt to determine the value of its mines, and yet the Lake Superior copper district has already produced two thousand tons in a single year. The value of the copper which has been produced, equals, at twenty-five cents per pound, $2,700,000. The copper region which ranks next in value is in North Carolina. It has been referred to. The ore is the yellow sulphuret; the country is far better adapted to mining than that of Lake Superior. Indeed, it is of all others the best, whether we consider its climate, its means of sustaining a mining population at a cheap rate, or the production of timber for shafting, tunnelling, fuel, &c. We do not yet know the real extent and value of its copper ores, but we have not the least doubt of the ultimate success of its copper mines.

It is not to be expected, however, that one-quarter of the veins which are now being tested will prove to be mines. Even if one in

ten turn out well, North Carolina will become one of the richest mining districts in the Union.

The resources in copper in Tennessee are also remarkable, and particularly so, as several mines became productive from their first trials. I allude to those of Ducktown.

9. Although gold has been obtained in considerable quantities for half a century, still the mines and deposits have not been worked in a systematic manner. Gold mining operations have been conducted in the loosest manner. Present and immediate gains have been sought for, and hence no permanent works have been erected, except in a very few instances. Within the last two years, more system and more capital have been employed, and a better and more consistent view is now taken of gold mining, and the prospect is becoming daily more favorable to the enterprise. North Carolina is the centre of the gold region, and will rank in value next to California. There are no accurate returns for the amount of gold North Carolina has furnished. Of the gold of California, the estimated production is less than the actual. The Hon. T. Butler King estimated it for 1848–9 at $40,000,000.

10. Our plaster, salt, marble, granite, and freestone, form other large items of mineral wealth with which the United States abound. In the list of mineral property, mineral springs should not be forgotten. They administer to the health of the people.

11. The only mines of quicksilver which are now known in the United States, are situated in Santa Clara, twelve miles from San Jose, in California. It is found in bunches in ferruginous clay, forming in part a hill 1,360 feet above tide. It is associated with broken-down magnesian rocks. The deposit is large, but no accurate returns of the yield of quicksilver have been published. The mine is being worked in a systematic manner.

We have no mines of tin, properly speaking.

I have said nothing of coal. It is almost impossible to measure or weigh in calculation its amount. But President Hitchcock observes truly, that the whole amount, in solid measure, of the coal in the U S., equals at least 3,500,000 square miles.

When it is considered that our country is destined to support its hundreds of millions of souls; that its fleets, its mines, its manufactures, its locomotives, and the domestic firesides, must depend upon its mineral fuel, and when we also estimate the vastness of our resources in the mineral kingdom, we cannot but see that everything necessary for prosperity has been provided with the most liberal hand, and on the most gigantic scale; and has, moreover, been so distributed as to accommodate the many and the most distant parts of the Union. There can be no centralization of products and resources, so as to confer a preponderating influence on a few favored sections of the Union, in the south or in the north. But enterprise and industry may create anywhere a prosperous community by availing itself of those natural mineral and manufacturing resources which are provided throughout the land. Where these do not exist, agriculture comes in to supply the necessary elements of prosperity. Nature had no sectional favors to dispense when she grew the coal plant for nine hundred miles from north to south, and more than a thousand miles from east to west, extending over an area of a million of square miles, and at the same time

distributing her iron and other metals still more widely; to say nothing of the lands and mineral productions upon the Pacific slope.

Although I have not pretended to present a statistical account of our mineral resources, and what is recorded in the foregoing paragraphs is exceedingly meagre and unsatisfactory, still enough has been said to prove that our mining interests are to become one of the great sources of wealth, and that the real additions to the wealth of the nation is hereafter to be largely derived from its mines and quarries.

Part II. will contain a description of the Taconic and Silurian systems, as they are developed in this country.

ARTICLE V.

The Pacific Railway.*

SPEECH OF COL. BENTON, BEFORE THE BOSTON MERCANTILE LIBRARY ASSOCIATION, UPON THE PACIFIC RAILWAY AND THE PROPOSED FIVE NEW WESTERN STATES.

Col. Thomas H. Benton delivered the lecture before this Association, at the Tremont Temple, which long before the time appointed for the commencement was crowded to excess. The veteran statesman on making his appearance was received with the most enthusiastic applause. On the front of the platform we observed Abbot Lawrence, Esq., Chief Justice Shaw, Lieut. Governor Plunket, ex-Judge Wilde, Wm. Sturges, Esq., the Mayor, James Savage, Josiah Quincy, Nathan Appleton, and R. C. Winthrop, Esqrs., Henry J. Gardner, the Governor elect, ex-Governor Boutwell, Hon. Henry Wilson, and the Hon. Marshall P. Wilder, with several other gentlemen of wealth and influence.

* Though we have written and published so much concerning the Pacific Railroad that we sometimes fear our readers are weary of the subject, yet we feel compelled by a variety of considerations arising out of the nature and objects of our work, to give place to Col. Benton's views respecting the Central route. We should have been pleased, could we have published his entire speech on this subject recently delivered in Congress, but owing to its great length, we could not do so with propriety.

Col. Benton's description of the five new States cannot fail, we think, to interest every American citizen. We give no opinion as to the correctness of his description of the region between Missouri and California—the picture may possibly be too highly colored—but certainly no man who has not seen the country, has enjoyed better opportunities of obtaining correct information in respect to its topography and capacity of producing subsistence for civilized man.

We take this occasion to say that we deprecate the efforts made in many parts of the country, especially in the west, to depreciate the exertions which have been made by Col. Benton and Col. Fremont, to find and establish the best route for this great national road. Let them persevere, and whatever the result, impartial history will do them justice in the end.—We copy Col. Benton's Boston speech as published in the *American Railway Times.*—SEN. ED.

Mr. Benton, after expressing the pleasure which he felt on visiting Boston, said that he had come on an expedition, one of business, in which his heart and soul was engaged, and had been for a great number of years. The immediate moving cause, the great object which he had at that time on hand, and the form which it was about to assume, he owed to one of our eminent citizens—one who had done enough for his family, and for his country, but might yet perform a crowning act for the age and all posterity. (Applause.) He had come to speak to them upon the only subject which could draw him away from the absolute path of positive and inexorable duty—he had come to speak of the great region beyond the Mississippi river—of the physical geography of the great country which lies between Missouri and California, and of its adaptation to settlement and cultivation, and the construction of the great road which was to fulfil the original idea of Columbus, and carry us to the East Indies by going West.

The idea had prevailed that desolation pervaded all that region, and a part of the Rocky Mountains which had been most traversed justified in some degree the idea. To the North they were desolate; to the South they were arid and sterile; but through the centre they were fertile and inviting to the farmer to settle there. He set out with assuming, and that upon great and studious, and anxious examination of the subject, that the five great States which now stretch half way across our continent in the same latitudes, (Pennsylvania, Ohio, Indiana, Illinois, Missouri,) may be matched by an equal number of States, equally great, between Missouri and California; and that the country is perfectly adapted to the construction of a railroad, and all sorts of roads, traversable in all seasons. There was territory enough for two great States between Missouri and the Rocky Mountains, and every acre was available to the support of man and the domestic animals.

On the North side there was the beautiful river Kansas with its four forks running from west to east—and beautifully parallel to each other, without mountains or ridge between to interrupt their communications, and making, after their junction, near two hundred miles of steamboat navigation before their united waters reach the great Missouri river. All the land drained by these streams constitute the Valley of Kansas—if the term valley can be applied to a region which has but little perceptible depression below the general level of the country. One general description applies to the whole—the soil rich like Egypt, and tempting as Egypt would be, if raised above the slimy flood, waved into gentle undulations, variegated with groves and meadows, sprinkled with springs, coursed by streams, and warmed by a sun which warms without burning, and blessed with the alternation of seasons which give vigor to the mind and body. Egypt thus raised up, and changed, might stand for Kansas; as she is, the only point of comparison is in the soil. For this valley is high and clear, diversified with wood and

prairie, watered by springs and streams, grassy and flowery—its bosom filled with stone for building, coal for fuel, and iron for the home supply of that first of metals.

Some who went there might return with an evil report of the country. That was an old business. (Laughter.) New countries had been reported upon evilly from the time of Moses, from the time that he sent twelve messengers to spy out the promised land. When they returned, ten of them gave an evil report of the country, for which we knew they were punished by a detention in the wilderness for forty years. We know what they said; there was no wood, no water, the people were living in fenced cities, and the inhabitants were of such gigantic stature that the children of Israel would look as nothing by their side.

This was the North side of Kansas. He now turned to the South. This south side includes the whole body of the Arkansas river, from near the Missouri line to its headmost spring in the Rocky mountains—a length of above seven hundred miles on a straight line, and near double that length in the meanders of the stream. This gives to the Territory a second large river, and in the right place, and flowing in the right direction—and parallel to the other, as if its twin sister; and so near together as to be seldom more than a degree, and sometimes not half a degree, from each other, and no mountains or high grounds between them. This, of itself, is a great advantage to the Territory; for the Arkansas, like all rivers in the prairie country, brings fertile borders, and groves of wood and rich grass, and makes an attractive line for settlement and travel.

Fertility was the general characteristic of the whole territory. A vast illimitable plain spread itself to the West, covered in proper season by myriads of buffalos and other game. In the meantime the settler has an attraction—superior with many, and profitable as well as pleasant in itself—to draw him into this vast plain. That is the pastoral pursuit: for this is the bucolic region of our America—now the resort of wild animals—and soon to become the home of the domestic. A short sweet grass, equally nutritious in the green or dried state, (for it dries of itself on the ground), covers the face of the earth, inviting all ruminating animals to take their food on it, without measure and without stint—a great pastoral region, in which the ox will not know his master's crib, nor the ass the hand that feedeth him, but in which the dumb, unconscious beast, without knowing it, will feel the bounty of the Hand which is the giver of all good.

This was the description of the first Kansas—the one which will go half way to the mountains—equal in territorial extent to the first class States, exceeded in productive capacity by none, and soon to become one of the great States of the Union. He would call it East Kansas.

The second State would occupy the remainder of the territory to the base of the Rocky Mountains; and, like the first half, will have the natural division into three parts, and with the same characteristics; but with a reversal of the localities. The Arkansas river side will be by far the most valuable—both intrinsically and in its locality; but the Kansas side will still have its value and attraction.

It took the head waters of the Kansas river at the base of the Rocky Mountains, and all kinds of the pastoral soil was good, for on it was produced the esparcette, a species of clover cultivated in Germany for the fattening of swine, and which was indigenous to these mountains. Fremont thus speaks of this upper part of the Arkansas, as seen by him in his various expeditions, and especially in the one of last winter: "The immediate valley of the upper Arkansas, for about two hundred miles, as you approach the mountains, is continuously well adapted to settlements as well as to roads. Numerous well watered and fertile valleys, broad and level, open up among the mountains. The whole of the intermountain region is abundant in grasses, wood, coal, and fertile soil. The pueblos which exist there prove it to be well adapted to the grains and vegetables common to the latitude, including Indian corn, which ripens well, and to the support of healthy stock, which increases well, and take care of themselves summer and winter." Of the climate and winter season in this elevated region he thus speaks: "The climate is mild and the winters short, the autumn usually having its full length of bright, open weather, without snow, which in winter falls rarely, and passes off quickly. In this belt of country lying along the mountains, the snow falls more rarely, and much more thinly, than in the open plains to the eastward; the storms congregate about the high mountains, and leave the valleys free."

Let us fix our eyes up that river whose name has just come into our geography named by the Spaniards Huerfano. It comes from the due West, drawing its extreme Western waters from the base of the mountain, called the Sierra Blanca, the White Mountain, because it was generally covered with snow, and directly in a line with the setting sun. It presented a tempting ground for cultivation, abundant in soft grasses, lines of timber upon water courses, coal and iron, and the beauty of the landscape which opened there, was described to be surpassing—Pike's Peak rising like Mount Blanc, grand in its elevation, luminous in its eternal white, and which no Packard or Sassure had yet ventured to climb. The scenery as we approached the country between the Spanish Peaks and the Sierra Mohada was picturesque and beautiful. Mountains towered high above us, the summits of some covered with snow in July, while the dense forests of dark pines which clothed their sides, contrasted well with the glittering white at the top, and the light green of the soft grass at their base.

Then comes the large and beautiful valley of San Luis, said to be one of the most fertile in New Mexico. Indeed, fine land was upon the whole route, and the climate is such that stock can live out all the winter upon the grass. On this route there is an abundance of grass and water, so much so that stock will travel and keep fat. Mr. Fremont found the climate mild, and in December he was waiting for snow before making his proposed ascent of the mountains. Then there were several magnificent gates or passes through the mountains; that which Fremont went through, because it was on his direct line, being called the Sandhill pass. The beautiful valley of San Luis was seen through it. Loaded wagons could go through that pass, and he (Col. Benton,) apprehended that a car could go there, (Laughter and applause.) Could a car go there? that was the question. Fremont said that standing at the mouth of that pass, and looking back to the starting point in Missouri, the line would run straight all the way between the parallels of 38 and 39, and there was no intervening obstacle, no elevation of ground, nothing to interrupt the vision throughout the whole length of seven hundred miles. That was corroborated by the fact that the river Arkansas which takes its source there, rolls some 1500 miles before it enters the Mississippi, and never has a fall in its whole distance. That tells the whole story—that it is a vast inclined plain, without inequalities or interruption of any kind.

That would do for a start, he thought, fair start. (Laughter.) It was upwards of one-half the distance of the whole road required to be made; and there was a splendid pass at that South-west corner of West Kansas, while writers in the Edinburg *Review* had put it down that there was an impassible barrier, beyond which human beings could never go. There, near that place, there were no less than eight passes through the mountain, which went through on a beautiful level.

Through the Sandhill Pass, and its continuation (the Sahwatch) to the Coochatope, the ground was so smooth as to present no exception to its level but the natural curvature of the earth. Meeting a man on horseback in this long level of more than 120 miles, (counting the entire valleys of San Luis and the Sahwatch,) is like meeting a ship at sea; you see his head first, then his body, then his horse, and last the ground. The pass itself, as well as the approaches to it, is perfect. Fremont calls it "an open, easy wagon way." Beal and Heap say it was a question whether they had passed the dividing point between the eastern and western waters—which could only beanswered by referring to the water itself. More than forty loaded wagons went through it in the summer of the year 1853, twenty of them guided by Leroux for Capt. Gunnison—and the rest by emigrant families, without guides. But more than that, the buffaloes have travelled it always—those best of topographical engineers, whose instinct never commits mistake, and which in their migrations for pasture, shelter, and salt, never

fail to find the lowest level in the mountains, the shallowest fords in the rivers, the richest grass, the best salt licks, the most permanent water; and always take the shortest and best routes between all these points of attraction. These instinctive explorers traversed this pass, and gave it their name—Coochatope in the Utah language, *Puerto del Cibolos* in the Spanish—which being rendered into English signifies the Gate of the Buffaloes. And their bones and horns, strewing the ground, attest their former numerous presence in this locality, before the fire-arms of modern invention had come to their destruction at such a crowded point of rendezvous.

This instinct of the buffalo was first made known by Baron Alexander Van Humboldt; and Mr. Benton amused the audience by relating the discomfiture of some "school-house engineers" in Virginia, who, surveying for a railroad, were too learned to take the buffalo track at first, but at length were compelled to do so. He concluded by saying that this was enough to show that the Rocky Mountains may be passed without crossing a hill — that loaded wagons may cross it at all seasons of the year. This applies to the Coochatope pass, but there are many others, and all good, and it is curious to detect the Latin language in many of their names, put upon them in the Spanish translations of the original Indian. Thus, we see *porta* in *puerto* (a gate,) constantly recurring, as *Puerto del Cibolos; Puerto del Mosca*, in which latter, besides the *porta* we detect the Latin *musca* (fly,) *Anglice*, the Fly pass from the unusual number of those insects which the Spaniards found in it; *Puerto del Medio*, (medium,) the Middle Gate, &c., &c.

The whole region was a good country for man as well as buffalos, being elevated, delicious and fresh in summer, and mild in the winter. If anything more was wanted to establish the character of this mountain region for fertility of soil and attraction for man; it was found in its character of hunting, and of war ground. Fremont says he found it the most variously and numerously stocked with game, and the most dangerous "war ground," which he had seen in all the extent of the Rocky mountains—both indexes to a fertile country. Western men would understand this, and remember how Kentucky was called the "Bloody Ground," because Indians came there to hunt the numerous game, feeding on the rich grass, product of her rich soil; and to fight for its possession. By this test, and it was one that never fails, this mountain State would be one of eminent fertility.

Then, of the mountains he made a third State, of 60,000 square miles of country, adapted—no, not adapted—delightful for human beings to live in, twice as much so as Switzerland, without the drawback of avalanches and glaciers. It was a place where the hunter would find plenty of employment. Nobody was ever known to get sick there, and all got well who went there sick. [Laughter.]

But in that region of the Rocky Mountains, between the parallels of 38 and 39, there was a succession, a perfect labyrinth, of beautiful valleys of all sizes. One of them was described by Superintendent Beale, and it was only a sample of the rest. He was invited by some Utah Indians to go into their camp. He went there alone, and said the most enchanting prospect spread itself before him.

The valley was small, probably not more than five miles wide by fifteen long, but surrounded on all sides by the boldest mountains, covered to their summits with alternate patches of timber and grass, giving it the appearance of having been regularly laid off in small farms. Through the centre a fine bold stream, four or five feet deep by forty wide, watered the meadow land, and gave the last touch which the valley required to make it the most beautiful he had ever seen. "Hundreds of horses and goats were feeding on the meadows and hillside; and the Indian lodges, with the women and children standing in front of them to look at the approaching stranger, strongly reminded me of old patriarchal times, when flocks and herds made the wealth and happiness of the people, and a hut was as good as a palace. I was conducted to the lodge of the chief—an old and infirm man—who welcomed me kindly, and told me his young men told him that I had given of my small store to them, and (in Scripture phrase,) to 'sit in peace.' In about fifteen minutes a squaw brought in two large wooden platters, containing some very fat deer meat and some boiled corn, to which I did ample justice; and when about to leave, found a large bag of dried meat and a peck of corn put up for me to take to my people."

This was one of the valleys of which there were a vast number. But there was still something more surprising than that. There was something there which his geographical knowledge had not found elsewhere; a peculiar kind of mountain called by the hunters "round mountains." They had rich sides, covered with grass, often sweeping the horses to the saddle-girths; their tops were level, and diversified with the growth of the prairie. They were filled with antelopes and deers, and looked like parks of noblemen, dressed up with all the art and skill of a luxurious land. But it did not stop there. It did not stop with the fine soil, those groves of timber, those prairies on the tops of the mountains, but there was something which Switzerland could not show—miniature lakes, deep, limpid and cool: in short, it was a most enchanting place for human beings to live in. Fremont found in the month of January the ground in the valleys free of snow, and the horses of the Indians feeding and in good order, which he was able to testify not only by view, but by eating one of them, which he said he found to be as fat as a buffalo. [Laughter and applause.

Col. Benton then interested the audience by a narration of some of Fremont's romantic adventures, with the view of showing the

friendliness of the Utah Indians, ascribing their attacks upon travellers to injuries they received. To show the ease with which the country can be traversed, Messrs. Beale and Heap reached the east fork of the Great Colorado of the West, and in crossing it, they lost, by accident of an overturned canoe, their supply of ammunitions, both for the gun and the mouth, and were forced to send back to the nearest settlement for a further supply. That nearest settlement was Taos, in New Mexico, distant three hundred and thirty miles; and that distance to be made upon mules, finding their own food, which had already travelled, on the same condition, one thousand miles from the frontier of Missouri; and these mules, [thus already travelled long and hard, without other food than the grass afforded,] now made the double distance at the rate of forty miles a day—still finding their own food; and, on the return, bringing packs on the backs. This performance must stand for a proof that a whole mountain region between the Upper Colorado and the valley of the Upper Del Norte is well adapted to travelling, and that in a state of nature, it is also well supplied with nutritous grass; and this clears us of the Rocky Mountains, from which to the Little Salt Lake it is all an open, practicable way—not limited to a track, but teaverseable on any line. Loaded wagons travel it in a state of nature. Then that was the third State, the Switzerland of the West.

The valley of the Upper Colorado would furnish the territory for the fourth State — 150 miles wide from the western base of the Rocky Mountains to the eastern base of the Wahsatch and Anteria ranges — and 300 or 400 in length up and down the river. The face of the country was high and rolling, with alternations woodland and prairie; and open to roads and settlement in any direction.

This would be the fourth State—equal in extent to any, inferior in soil, superior in wood and water, softer in climate, better in due alternations of woodland and prairie; and being part of Utah Territory, it is now under the dominion of law and government, and open to immediate settlement; which in fact is now going on.

The fifth State would consist of the remainder of the Utah Territory, beginning at the eastern base of the Wahsatch and Anteria ranges, and extending 300 miles to the California line — upon whatever breath might be desired. It would include, [towards its eastern border,] the Little Salt Lake. It would be a magnificent State; its eastern limit; there the rim of the Great Basin, would embrace the broad expanse of the Wahsatch and Anterria ranges, where nature has crowded and accumulated into an hundred miles square, as into a vast magazine, a profusion of her most valuable gifts to man. Soil, water, grass, wood, timber, rock salt, coal, stone; a due alternation of mountain and valley—the former cut into blocks, white on the top with snow, dark on the sides with forests, and their bosoms filled with ores; the valleys green with

grass, fresh with cool water, opening into each other by narrow level gaps, or defiles; the climate so soft that animals live out all the winter, and February [fo frosty and frozen with us,] the usual month there for starting the plough.

At the actual southern extremity were the Mormon settlements, consisting of the three enclosed towns of Parowan, Paragoona and Cedar City, near to which the proposed line passed; a coal mine had been opened for about eighty yards, and iron works already established. Iron here occurs in extraordinary masses, in some parts accumulated into mountains, which come out in crests of solid iron, thirty feet thick and a hundred yards long.

Fremont brought home specimens of this coal and iron, of which Professor Baird, of the Smithsonian Institute, had made an analysis, and discovered 70 per cent. of iron in the ore, whilst the coal was bituminous, like that of Pennsylvania.

The Mormon were pretty towns, built to a pattern, each a square, the sides formed by lines of adobe houses, all fronting inwards, with flower and kitchen gardens in front and a large common field in the rear crowded with growing grain—and all watered, both fields and gardens, and the front and rear of every house, with clear, cool streams, brought down from the mountain sides, and from under a seeming conopy of snow. Grist and saw mills at work; forges smelting the iron ore; colliers digging the coal; blacksmiths hammer the red hot iron into farming implements, or shoes for the horses, assisted by dexterous Indian boys; cattle roaming in rich pastures; people quarrying, and the cattle licking the rock salt. Emigrants obtain supplies here—beef and flour at moderate prices—and it was here that Fremont was refitted after his seventy days of living upon his mules which died from exhaustion. The number and beauty of these valleys and fertile mountains, seen by Beale and Heap in exuberance, the ripe, rich dress of midsummer, excite their wonder, and call forth enchanting descriptions. It is impossible to read their descriptions without being reminded of Central Persia, and of that valley of Shiraz, celebrated as incomparable by the poets, but matched and surpassed in the recesses of the Wahsatch and the Anterria.

Col. Benton then spoke strongly in advocacy of the proposed railroad. Fremont believed in its practicability, and in 1848–49, set out, taking the winter for his time, the west for his course, a straight line his object, the mouth of the Kansas for his point of departure, St. Louis and San Francisco the points to be connected. The parallels of 38 and 39 covered his course, and between these he continued to move west until he reached the Little Salt Lake, within three hundred miles of the California line. After that, upon a slight deflection to the south, between the parallels 37 and 38, until he entered California. This may be called a straight line; and so fulfils a primary condition of every kind of road, and especially of a railroad. Smoothness of surface, or freedom from ab-

rupt inequalities in the ground, was the next consideration, and here the reality exceeded the expectation, and even hopes, and challenges incredulity.

And this completed all that was necessary to be shown in favor of the smoothness of the way—its equality of surface throughout the whole line—although it attains a great elevation, and lands you in California, in the rich and unsettled valley of San Joaquin, proximate to the southern end of the gold mines. Not a tunnel to be made, a mountain to be climbed, hill to be crossed, a swamp to be seen, or desert, or moveable sand to be encountered, in the whole distance: so that this line for a road, the longest and straightest in the world, is also over the smoothest and most equal surface. For, although a great elevation is attained, it is on a long line, and gradually and imperceptibly—the mere rise of an inclined plane.

He wished to make the project known to the solid, the enterprising men of Boston; and he undertook to say, reasoning from cause to effect, that that road would be made, not by authority of Congress, but by private enterprise, by private means, upon the same principle on which nearly 20,000 miles of railroads had already been made in this country. There was a charter from God and nature for the road, and that charter would be used. [Applause.] The road would draw to those regions the largest emigration, and produce the most rapid extension of the human race which the ages of man had ever beheld. What were the difficulties in the way? It was nearly half built now, and the railways from this city and almost every part of the Union, would have access to it by way of Cincinnati and St. Louis. See all the railroads opening out like an extended fan, but it was a fan without a handle to it, and that handle this Pacific Railroad would supply. He had come here to get some assistance towards putting that handle to it —not to get a subscription of money. If he did he should be met with a story of hard times. [A laugh.] He did not want their money, but their names, so as to commend the scheme to the confidence of the country. How? — their names endorsed upon a note? No. Upon the foot of a note? No.

How then? To put in a Bill which Congress could pass without constitutional scruples, and by which the names of those who were put therein, should be allowed a right of way in the public lands a mile wide, through Kansas and Utah, to open this road: and that they should have a year to decide whether they would accept the grant or not. He urged upon them not to depend upon Congress doing the work, but upon themselves, upon the American population, and said that he relied especially upon the men along this Atlantic seaboard who had already shown so much enterprise, so much public spirit. Boston was the first to begin the East India trade. Here was an opportunity of making a new road to India

across our own dominions. What a spectacle it would be to exhibit to the world!

We might then get that Oriental commerce, which had been fought for, for thousands of years by Jew and Gentile before they were Christians—fought for by Christians from the moment they existed—not only Christians against Christians, but one section with the Saracen as his ally. And to get what portion of that trade? That which was carried over frightful deserts, over difficult rivers, and occupying hundreds of days in transportation over the wilderness, on the backs of camels, through many nations, all savage and considering the merchant as their lawful prey. For such commerce as that, carried on in that way, nations had fought, Turk and Venetian side by side against the Portuguese, and by it cities like those of Venice and Genoa had raised themselves to wealth and to the power of empires.

Now when little rivulets of that commerce were fought for in that style, and had that effect upon the power and wealth of mere cities, were we not induced to verify the remark of the elder Pliny, in respect to the commercial spirit of republics, by taking that commerce to ourselves? He appealed to the merchants of Boston for support of the scheme, to those who knew how to aggrandize their country by enriching themselves. We should realize the idea of Columbus in a different idea from what he conceived it. Thanks to the progress of the mechanical arts, we now had locomotives flying across the country with the velocity of a carrier pigeon, and the telegraph wires conveying a message between kingdoms in the twinkling of an eye. Should we not use those advantages? We should—we would.

We must see revived in our America from the Mississippi to the Pacific those cities which were once the pride and wonder of the world, the Tyres, Sidons, Palmyras and Baalbecs, all becoming rich and powerful by Eastern commerce, and sinking down into barbarism when they lost it—revived and to flourish as much as the richness of the regions he had pointed out surpassed those deserts where they were situated, and as much as the advancement of civilization and the improvement of the arts puts the race of to day ahead of the Asiatic race of 2000 or 3000 years ago. We must have the railroad, and to have it we had but to will.

If the solid men of Boston, some two dozen, would take the lead, other maritime cities would join them, every railroad company would find itself interested in it, every express company, every telegraph company, every man would find his own interest promoted by the construction of the road, which would put us in close connection with golden California, and open a door to Asiatic commerce—one end pointing to Canton and Jeddo, and the other to London and Paris. What a consummation to be accomplished by our America, all lying at her feet for acceptance!

Col. Benton resumed his seat amid enthusiastic applause.

The following remarks made by Col. Benton in the House of Representatives, on the 16th January, 1855, indicate his present views touching the means and method of constructing the Pacific railroad.

The House being in the Committee of the Whole on the state of the Union, on the Pacific railroad bill—

Mr. BENTON said :

Mr. Chairman: I have desired for some time past to change the plan of making this road —to withdraw it from legislative authority, where political and sectional interests must always interpose —and leave it to a company of business men, where business considerations could only prevail ; for this is a case in which private interest would go hand in hand, that which would be best for one being best for the other ; and so insuring the selection of a route which would be most national, because most suitable to the greatest number. With this view I have turned my attention to private enterprise, and have found solid men who are willing to take the preliminary steps now, preparatory to the final assumption of the work—Congress granting the necessary authority, and conferring the right of way through its territories, one mile wide on each side of the road. No military protection—no alternate sections—no gift of money—no aid but the right of way and payment for transportation of mails, troops, and munitions according to a plan not yet matured. Telegraphic lines to be established or permitted, and transportation to begin before the road is finished, by using stage coaches for the remainder, according to a plan which may be agreed upon. No exclusive privilege, except in two degrees on each side of the road, to keep off competition, leaving all the rest of the country open to other roads. The substitute bill which I propose contains the names of some of these citizens, and with whom other solid men will deem it a privilege to be associated—not that all will be expected to be millionaires, but only good for what they promise; for it is not intended that straw-men or windmen shall get control of this undertaking. The consent of those in the bill will be necessary to the admission of every new associate; but after the act shall be accepted, books of subscription are to be opened in every State of the Union, and the stock divided into convenient shares, to suit short as well as long purses.

Congress has ordered surveys of routes: they are not ready: but that is no impediment to the adoption of my substitute, which fixes no route; but leaves it to the company to choose their own: and no company, using their own money will act upon any survey but their own. Such a company will look before it leaps: and if it did not, it would not leap long. It will send out its own surveyors—practical engineers and road-makers—to report upon every mile of the way, and under every aspect of cost and feasibility. To such a company the Government surveys are not wanted, even if

ready, and made properly, in winter as well as summer: and, in fact, they were not intended for a company, but for Congress—intended to enable Congress to fix the route itself—a consummation which is now found impossible to attain. I would have preferred that Congress should have made the road, as a national work, on a scale commensurate to its grandeur, and let out the use of it to companies, who would fetch and carry on the best terms for the people and the Government. But that hope has vanished, and the organization of Kansas having opened up the country to settlement, and placed it under law, and carried it into conjunction with Utah and New Mexico, a private company has become the resource and the preference. I embrace it as such, utterly scouting all plans for making private roads at national expense—of paying for the use of roads built with our land and money—of bargaining with corporatoins or individuals for the use of what we give them—a species of bargaining in which my observation informs me that the Government gets about as badly cheated as Moses Primrose was when he sold the colt which had been in the family nine years; and as much worse as his father was when he undertook to help out the matter by selling Blackberry. I presume every member knows how that was: for I would be sorry to suppose that any one, possessed of the English language, had lived to man's estate without enjoying the luxury of reading the Vicar of Wakefield. For my part, I have been reading it since I was five years old, and with augmented enjoyment every time and especially since they have got to putting pictures in it, and above all that picture of Moses selling the colt for a gross of green spectacles with silver rims and shagreen cases: a picture for which the United States sit every time Congress undertakes to make a bargain for the public. I eschew all such bargains, and all private roads made at public expense; but am willing to have as many as any one pleases upon the same terms as contained in my substitute—and there will be room for several such; but I do not think another will be built in our day.

I prefer the Central route: the administration eschews that route, and lays out its strength in favor of frontier routes, by Canada and Mexico. It sent a surveying party on the Central, but only to go a part of the way, and turn round—leaving the essential section between the Little Salt Lake and the valley of the San Joaquin unexamined. Mr. Fremont supplied that omission last winter, exploring a new and direct route between those points, and through the Sierra Nevada—completing all that was wanting in that quarter. This new route cut off the elbow to the southwest made by the old Los Angelos trail, avoided the desert which it crossed, and left far to the south those excitable sand fields, in which no number of horses can leave a track—in which what is a hillock to-day is a hole in the ground to-morrow—where, under a gentle breeze the sands creep like an army of insects—where the

traveler who lies down to sleep during the night in a light wind, must rise and shake himself often to avoid being buried in the sand: and where, during a high wind, the air is filled with a driving tempest of silicious particles, very cutting to the skin and eyes, very suffocating to the throat, very dangerous to men who are not tall and swift—where men and animals fly for their lives when they feel the wind rising, and where this administration would carry the road. Fremont's new discovery avoided all that; but without conciliating our administration. Frontier and foreign routes monopolize their affection, and engross their cares, involving, in my opinion, at least in one instance, a misapplication of the appropriation for the survey of routes. I allude to the Puget Sound route, skirting the British line all the way, going where nobody travels, where nobody lives, and where nobody can now want a road except the British fur company, and a certain chartered company, of which Mr. Robert J. Walker and Mr. James Duane Doty are the heads; and which route the debates in Congress show was not within the contemplation of the law when the appropriation was made.

ARTICLE VI.

Meteorological Observations–The Seasons, Weather, &c.

By Revd. J. M. PECK.*

Dry weather, an unfavorable season, short crops, and fears of starvation, have been the general complaint over one half of the States east of the Mississippi, from the first of July, during the past year. And Missouri, and the Southern part of Iowa, have shared in the same calamity.

The extraordinary high prices of most articles of food, and the sufferings of the poor and improvident in the large cities, during an unusual and sudden financial pressure, are circumstances quite unusual.

In all former depressions of trade and financial embarrassment in this country, within our recollection, food has been plenty, and at low rates, though the want of employment may have kept thou-

* It must ever be a source of regret to the natural philosopher and historian that accurate and continuous meteorological observations were not made and preserved in all the States of this Union, from the date of their earliest settlement. Such facts would in time show to what extent the arts of civilization are calculated to affect the normal meteorological condition of countries, and ameliorate their climate. We sincerely thank the author of the following article for the opportunity of publishing the result of his observations, and most respectfully invite all others who may have made and preserved similar observations in the valley of the Mississippi, to furnish us with their facts for publication.—SEN. ED.

sands on the verge of suffering. The failure of the potatoe crop throughout the region of drought, at the retail price now in all our markets at $2 per bushel, is an illustration of the position we take:

That the weather and seasons have great influence on the means of human subsistence.

It would be interesting to all classes, and profitable to all pursuits, if we could have a complete registry of the weather and seasons in this valley for the last forty or fifty years; accompanied with meteorological tables, kept at important points. We know not the sources from whence such information can now be obtained; at least in sufficient extent, to constitute a basis for practical purposes. At the military posts, thirty years since, the surgeons of the army, by direction of Joseph Lovell, *M. D.*, Surgeon General of the U. S. Army, took meteorological observations, kept registers, and made reports to the head of the Department, for several years. Whether the practice has been kept up, we know not, but it certainly ought to have been for the common interests of humanity.

We suggest that those who have any journal of the weather, its changes, and the effects on vegetation and crops, with barometrical and thermometricel observations duly registered, report the same, with all other facts in their possession, pertaining to the subject, through the *Western Journal.* By collecting the scattering fragments that have been preserved, an approximation can be made towards a more complete history of the subject.

There are several fallacious notions, some of them grossly superstitious, prevailing even amongst persons of information and good sense, about the weather and causes of change. The one that has obtained the most extensive influence over the human mind, is the supposed influence of the moon on the atmosphere, and the changes of weather. Even the distinguished astronomer, M. Arago, wrote an able article on this subject, in 1833; and the conclusion of his statements would seem to confirm the theory.

A single *fact*, that may be known by any one who will examine tables of the weather, kept in different countries, and in the same country, at the same time, will overthrow all such speculations, and destroy the popular theory. Since the deluge of Noah, *storms of all kinds, whether of rain, snow, hail, sleet or wind, are local, and never extend but a few hundred miles from a centre.* Many severe storms and continuous rains do not extend three hundred miles.

It is rare indeed, and we question if the fact has been otherwise since the settlement of the United States, that the extremes of wet and drought do not exist at the same time and under the influence of the same moon, within our own country. The season of 1844 is a full illustration of this fact. It was the period of the great flood in the Missouri and Mississippi. The bottom land in these rivers was submerged from bluff to bluff, and not an ear of corn

was produced on the river bottoms from the upper settlements of Missouri to Vicksburg, *except in the city of Cairo*, at the point of junction of the Ohio and Mississippi. This spot was defended, and the water kept out, by the old levee. We saw a field of corn there the first week in October, that from a cursory examination, we supposed would yield fifteen barrels, or seventy-five bushels to the acre.

From the middle of May to the 20th July, that season, the rains were so excessive in this part of the Mississippi valley; not only near the streams, but over the whole district, that in many instances on the uplands and prairies of Illinois and Missouri, the farmers could not work their cornfields, and the grass and weeds destroyed the crop.

At the time of this flood, and these excessive rains, a severe drought prevailed along the border of the Atlantic coast, from the Potomac to the Lake country and St. Lawrence. The farmers suffered severely, and the crops were cut short. The moon was the same within one hour at both localities.

On the 14th and 15th of February, 1846, a severe snow storm prevailed on the Antlantic coast, from Savannah to Labrador. At Philadelphia, where the writer was, it commenced on Saturday, the 14th, at half past one o'clock, P. M., and continued, without intermission, until the 15th at four o'clock, P. M., when the wind died away, and the storm subsided. The depth in that vicinity, when it first fell in places secure from the wind, was from 18 to 20 inches. In Maine, and towards Nova Scotia, it fell to the depth of three feet or more. Its outer verge east was noticed in the Atlantic ocean about 1000 miles from the American coast. At Cincinnati, it was a light snow of some four or five inches, with very little wind. The last remains of this snow westward, was in the Wabash valley. At St. Louis the weather was partially clear and pleasant. Eight days after, while this snow was melting away rapidly under the influence of the sun in Philadelphia, there was a snow storm in this vicinity that left its mantle several inches deep.

Many of our readers may recollect this great storm of February 15th, from some peculiar attendant circumstances. It was at the period of the adjustment of the Oregon boundary question with the British Government. Who does not recollect the slang of certain political papers of "54° 40′ or fight?"—which in a brief period and quiet manner cooled down to the forty-ninth degree and peace.

There was great excitement, and even alarm amongst our commercial men and others in the Atlantic cities, lest the "vexed question" should involve us in war. The journalists, merchants and bankers had established lines of expresses reaching from Philadelphia to Halifax, to bring the earliest intelligence of the monthly steamships of the wintry season. Some time in January, the swift-sailing barque Romer, a revenue cutter, left the port of New

York, in a sudden and mysterious way, manned by experienced pilots and mariners. Not a journalist could divine its object or destination. Curiosity was excited to the utmost pitch;—speculation was on tip-toe; gazing at this small craft that without rule or reason had plunged into the Atlantic ocean in the midst of a stormy winter, to go no one knew where or for what purpose.

In reference to the Oregon question, the British government had fixed its position on Columbia river; and so had the minister at Washington been instructed. "Young America" had declared for "fifty-four, forty, or fight." After the alarm was over, it became known that the *Romer* had been chartered by the British minister, with the approbation of our government, to convey dispatches to London and obtain a modification of his instructions to retire from the Columbia river to the forty-ninth degree, by the return of the February steamer, with authority to settle the dispute on that basis. The Romer reached the west coast of Ireland in less time than a sailing vessel had ever before made the passage; the bearer of dispatches, by the most rapid mode of traveling, reached London; the steamship at Liverpool was telegraphed to wait; the basis of the treaty was approved, the dispatches were returned by the steam ship, which entered the port of Halifax in the midst of the terrific snowstorm already noticed. It was with the utmost difficulty and the delay of several days that the expresses reached New York and Philadelphia, bearing the intelligence brought by the steamer. These incidents may bring to recollection this storm; the most severe that had been in the Atlantic States for thirty years.

It is natural and quite common, when no one keeps an accurate journal of the facts, to imagine the latest changes of the weather to be uncommon. The memories of persons, especially those who have passed the grand climacteric of human life, are not to be trusted about weather, and least of all is bodily sensation a correct criterion of heat and cold.

"This is the coldest winter I ever felt;" — "this is the hottest summer;"—"this is the worst drought ever known;"—"this is the most sickly season ever endured;"—and a hundred other assertions are made by persons on every apparent departure from ordinary seasons. When in mere boyhood, which goes backward over half a century, the writer noticed the common talk of aged persons,—"That the world was growing more wicked;"—"the people more dishonest;"—"the winters were colder;"—"the summers were shorter;"—and to employ a genuine Irish illustration, the wheels of progress were moving backwards.

All these notions seemed matters of reality to those who uttered them, and the same impressions have existed in every past generation, and the same opinions will be expressed by the boys and girls who live to be old people;—and their descendants will affirm the same things when their turn comes.

We place no dependence on an old man's memory about the weather and seasons, and hence we do not trust our own. Brief and imperfect memoranda were kept at the time referred to, so far as the writer testifies as to his own knowledge, and other facts given are derived from sources entitled to the highest credit.

The fullest and most accurate series of meteorological observations ever kept by one man in the United States, until recently, were by the late Dr. Holyoke, of Salem, Mass. He commenced his journal in 1786, made his observations daily with great care, and continued his daily entries to the close of 1828 ; and died on the 31st of March, 1829, in the *one hundred and first* year of his age.

Abstracts from this journal were published ih the second, fourth, and fifth volumes of the "Transactions of the American Academy of Arts and Sciences." The "General Results" of forty-three years (from 1786 to 1828,) giving the mean of each series, of seven parts, may be found in the American Almanac for 1834.

The hottest years in that locality were 1793, 1825, and 1828, in which the mean range from 50, 96 to 51, 35 (degrees and hundreths). The coldest year during the whole period was 1812 ;—mean 44,28. The greatest heat within the period was 101 degrees, June 23, 1816;—the same on July 21, 1825. The greatest cold was January 25, 1821, when the mercury in the thermometer (*Fah.*) sunk to 13 degrees below zero. The local position of Salem, on a bay of the Atlantic ocean, was favorable to a medium temperature. On the mountain ranges of New Hampshire and Massachusetts, the thermometer in the coldest mornings before sun-rise, has sunk to 30 degrees below zero.

Dr. S. P. Hildreth, of Marietta, Ohio, has kept a journal of meteorological observations for a longer period [we think] than any other individual in this valley. Abstracts have been given from time to time in Silliman's "Journal of Sciences and Arts." It may be the late Dr. Daniel Drake, of Cincinnati, a gentleman of long and careful observation on every subject connected with disease and climate in this valley, has left valuable tables of longer continuance.

Our own "Notes" show that the season of 1816 was remarkable for coldness, drought and backwardness of vegetation on the eastern slope of the Alleghanies. How the region about St. Lous was affected, we have no means of knowing. In all the Atlantic States north of Baltimore, corn, wheat, rye, oats and hay were cut short. In the vallies among the mountains of northern Pennsylvania and through the northern half of New York, corn was either killed or partially cut off by untimely frosts, which were severe enough to kill tender vegetables every month through the summer. In less exposed situations the effects were slight. Very little rain fell during the summer months. In the middle States a series of rain

storms prevailed eight days in succession, about the second week in September.

From December 1st to January 12th, 1817, the weather was singularly mild and pleasant; the atmosphere was hazy, or rather smoky; very little rain fell, and only light frosts.

The winter set in on the 12th of January with unusual severity; the frost penetrated the earth three feet and six inches beneath the paved streets of Philadelphia, and burst the water pipes in several streets; and the Delaware river froze over at Marcus Hook; an event that had not occurred since the "hard winter" of 1780. The mean temperature of January, 1817, at St. Louis, was 26°.

The spring of 1817 opened late, but the summer proved a very fruitful season in the east. In May, there was a severe drought in the Atlantic border north of the Potomac, and the cut-worm destroyed the young corn to an unusual extent. Much rain fell in June; July was variable and pleasant. On the 9th and 10th of August, there was a remarkable storm of rain through Pennsylvania and Maryland, and the streams rose to an unusual height. The Codorus which passes through Little York, in Pennsylvania, was dammed up by floating bridges and dilapidated mills, which gave way suddenly, and the flood swept through the borough of York, destroyed about fifty houses and stores, and drowned eleven persons.

Throughout the Mississippi valley the autumnal months were rainy, and the Ohio and its tributaries rose to flood stage, and the traveling was horrible. In this vicinity the rains commenced about the latter part of October, and did not raise the upper rivers. If any of our readers came to this region that season, they will retain a vivid recollection of their journeying across the Illinois territory. There were two principal trails; one from Shawneetown, or from Ford's Ferry, twelve miles below, on the old trace to Kaskaskia; the other from Vincennes to St. Louis. A branch trace struck off from the old Kaskaskia route, below the Muddy river, to the right, and passed through the present counties of Jefferson, Perry and Washington to the Turkey Hill settlement and Belleville. An occasional log cabin, a corn field and "truckpatch" was found on this route. Four prongs of the Big Muddy, the Little Muddy, and Big and Little Beaucoup, had to be passed without bridges or ferries, and frequently by swimming.

On the 9th of November, the Ohio river at Shawneetown was over its banks, half the town site was under water. Near the Bluffs the water was from four to six feet deep. The corn in Illinois and Missouri did not ripen well that season, and the crop was an indifferent one. The winter of 1817-18 was unusually severe; snow lay on the ground in the county of St. Louis from 10 to 15 inches deep, for several weeks. The last week in February, the winter broke, the ground in the prairies thawed, and rains fell. In the forest, snow and ice remained, and the ground beneath was frozen on the last day of February. The Missouri river was crossed on the ice March 2d. We made an excursion into the country that day about

fourteen miles from St. Louis, and two miles N. E. from Bridgeton, where these observations were made. In the Osage and Gasconade regions, that winter, snow lay on the ground for several weeks, from eighteen inches to two feet deep. This fact was narrated by a Mr. Richardson, who had removed his family into the wilderness between the Gasconade and the Osage rivers, the preceding autumn, and put up a small cabin, expecting to supply his family with provisions by hunting. Storm after storm of snow came, and finally a rain which made a crust, and he and his family came near starvation before he could find relief by hunting. About the middle of January, the thermometer in St. Louis before sun-rise was 14 degrees below zero.

The late Rev. Salmon Giddings made a series of observations on the thermometer [*Fahrenheit*] in St. Louis, during the years 1817, '18 and '19. His residence was on the spot where Wyman's Hall now stands; the blocks around were entirely open; the instrument hung in the air on the north side of the house.

The following results were given by Dr. Lewis C. Beck, in his "Gazetteer of the States of Illinois and Missouri,"* pp. 198, 199.

Mean temperature for 1817	55 deg.	52 hun.
Mean temperature from the beginning of May, 1818, to the end of April, 1810.....	56	98
Mean temperature for 1820.....	56	18

The mean of these results is about fifty-six degrees and a quarter, which probably was the *standard temperature* of St. Louis, when that portion of the city west of Third street was so nearly open as to have the atmosphere and temperature of the surrounding country.

The *mean temperature* of each month during the above years was given as follows—

January.....	30 deg.	62 h.	July.....	78 deg.	66 h.
February	38	65	August	72	78
March.....	43	13	September.....	70	10
April.....	58	47	October.....	59	00
May.....	62	66	November	53	13
June	74	47	December	34	33

The following statement shows the *annual range* of the thermom.:

1817,	lowest 5 deg.	below 0—	highest above 0,	101,	Range	96
1818–19,	" 8 "	above 0—	" " 0,	96,	"	88
1820,	" 6 "	below 0—	" " 0,	100,	"	94

The average *monthly range* during these years is as follows—

January,	from	3	degrees to	59	degrees.	Range	56
February,	"	6	"	74	"	"	68
March,	"	16	"	73	"	"	57
April,	"	32	"	83	"	"	51

* This valuable and now scarce work, the first ever prepared for these States, was gotten up by the author with great care, and published in Albany, N. Y., in 1823, octavo, 352 p.p. Dr. Beck was at St. Louis, and explored the country in 1820—21.

May,	from	43	degrees to	89	degrees.	Range	46
June,	"	52	"	94	"	"	42
July,	"	61	"	99	"	"	38
August,	"	59	"	96	"	"	37
September,	"	40	"	92	"	"	52
Otober,	"	24	"	81	"	"	57
November,	"	37	"	78	"	"	41
December,	"	19	"	63	"	"	44

The mean temperature of the different seasons in those years were as follows:

Winter, 34 deg. 53 hdths—Spring, 54.74—Summer, 75.34—Autumn, 60.77.

H. M. Breckenridge, Esq., made a tour of observation in Missouri, in 1810 and 1811, and wrote "Sketches," in the Missouri Gazette [now Republican], which subsequently were published in a volume; now to be found only in some public and private libraries. He writes, 1811, "The winters are usually more mild than in the same latitudes east of the Alleghany mountains, but there are frequently several days in succession of weather as cold as in Canada. Last January, after several weeks of delightful weather, when the warmth was even disagreeable, the thermometer standing at 78 degrees, a change took place, and so sudden, that in four days it fell to ten degrees below 0. This winter was also remarkable for a circumstance which the oldest inhabitant does not recollect to have ever witnessed; the Mississippi closed over twice, whereas it most usually remains open during winter."

Dr. Beck says, "The mean temperature of January, 1817, was 26 degrees; about equal to the same month in New York" [City, we suppose, in which the temperature in winter is always modified several degrees from that of the adjacent country]. "The winter of 1818–'19 was very mild, and exhibited a singular contrast with the two or three preceding. The mean temperature of January was 39 degrees, and the weather continued mild during the month of February, and the thermometer on some days rose to 72°.

The Mississippi remained open, at St. Louis, during the whole season. During the winter of 1819-'20, the Mississippi closed about the 20th of December, and remained closed until the 10th of February. The mean temperature of January was 27 deg., varying very little from that of the same month in 1817. On two occasions, the mercury fell to six degrees below 0. — From ten to twelve inches of snow fell during the month, and continued on the ground from three to four weeks. The winter of 1820–'21 differed but little from the last. The Mississippi continued closed [at St. Louis] for six or seven weeks, and the earth was covered with snow from six to twelve inches during the months of January and February.

The winter of 1821–'22 was less severe than the two former.—About the first of December the cold commenced. On the 22d,

the Mississippi closed opposite St. Louis. During the remainder of the month the weather was clear and pleasant, and the thermometer rose frequently to 60 degrees. On the 4th of January, the mercury fell to 4 degrees below 0. After this the weather became mild, and continued so during the month." On the 22 January, the ice broke, and the river was open, having been closed thirty-one days.

Concerning the temperature of the summers at that period, our information is deficient. By the register kept by the Rev. Mr. Giddings, we learn that on the 30th of July, 1817, the mercury rose to 101 degrees in the shade; and on the 19th of August the same year, it rose to 99 degrees. In June and July, 1818, the thermometer frequently indicated 96 degrees, but did not rise higher that season. In June, July and August, 1820, it frequently rose to 96 degrees, and once in July to 100 degrees. The summer of 1820 was the hottest and driest within the recollection of the old inhabitants at that time.

The summer and autumnal months of 1819, 1820, and 1821, were the most sickly seasons [excepting the cholera] we have ever witnessed in this country. Immigrants in unusual numbers had spread over the country under circumstances peculiarly unfavorable to health. They lived in new and open cabins, usually made of green timber, with loose floors of split slabs called *puncheons.* They frequently used the stagnant water of creeks and ponds, with a luxuriant, wild vegetation around them, and all the other annoyances on the settlement of a new, unbroken country. Their horses and cattle fed on the range, and farmers would be drenched in the dew on the tall grass, and in getting up their teams, and then plow their corn under the influence of a burning sun. Under such circumstances, it need not be thought strange that the fevers were far more malignant, and sickness more general than in later years. The same districts where autumnal fevers then never failed, there is as little sickness, and tables of mortality are as encouraging to health and longivity, as in the most favored positions in the same parallels of latitude in the older States.

During the summer and autumn of 1820, the fevers that prevailed were unusually rapid, malignant and fatal. The heat of the sun, and the severe drought of that summer, exceeded much the season of 1854. The occasional light showers of rain, and the freshness of the cultivated land, produced good crops of corn, but the period of heat and drought was far more severe on animal nature. For many days in succession not a cloud came over the sun to shield us from its burning influence. The fevers that prevailed assumed a malignant type, and frequently terminated fatally the fifth day, with almost every mark of the yellow fever as laid down in the books, both in town and country settlements. The same season was noted for unusual sickness in most parts of the United

States. The type was generally bilious; great mortality prevailed along the Wabash and White rivers in Indiana.

The summer and autumn of 1821, was another sickly seacon, though the fever was not as malignant and mortal as the preceding year. The population of St. Louis that year was about 5000. A register of all the burials was kept by the late Rev. Mr. Giddings; the number 136. This gives a ratio of one in thirty-five and forty-eight hundreths; by no means an alarming result. Comparing the tables of mortality the preceding year in Boston, New York, Philadelphia and Baltimore with the aggregate population of those cities, and the result is favorable to St Louis. And, then, not a street was paved in St. Louis, no sanitary regulations of any kind adopted, and full one-third of the deaths was from strangers and transient persons, who arrived sick, or were taken sick within two three days after arrival.

We have filled up our article without having exhausted our materials. Should the subject attract the attention of our readers, we may resume it in a future number.

COMMERCIAL DEPARTMENT.

COMMERCE OF ST. LOUIS.

We have several times suggested the importance of establishing some system by which the imports and exports of St. Louis can be ascertained with a sufficient degree of accuracy, to enable all who are in any way interested in the commerce of the Mississippi valley, to form a reasonable judgement in respect to the amount and value of its productions and consumption. The discrepancy which appears between the amount of imports, registered on the Harbor Master's books, and the table published in the "Annual Review of St. Louis for the year 1854," is so great that we desire once more to call the attention of the merchants of St. Louis to this subject. By comparing the following table of imports made up by ourselves in person from the Harbor Master's books, with the table published in the Annual Review, it will be seen that the greatest discrepancies are found in respect to the leading staples, where it is most important that accuracy should prevail.

It is true that our tables only show the amount of imports received by the river, but it is most certain that the quantity received by land does not account for the great difference in the tables. We do not know the cause of this difference, but if the table in the Annual Report be correct, then we should say there is no use in imposing upon the Harbor Master the duty of keeping a register of the imports, for in that case it is calculated to mislead rather than to enlighten the public.

COMMERCE OF ST LOUIS.

Imports into St. Louis by the river for five years commencing January 1st, 1850, and ending December 31st, 1854.

Articles	1854.	1853.	1852.	1851.	1850.
Apples, green, barrels.	1354	8905	9211	13094	20291
" dried, bls. & sacks	15445	16551	9218	20612½	14766
Axes, boxes	190	671	1415	692	1875
Bacon, casks	20444	16123	16727½	76183½	27106
" boxes	592	2014	979	962	6195
" bulk, pounds	56449	890179	889403	310495	553703
Bagging, pieces	2795	2679	3367	2765	1262
Barley, bushels	102972	110973	144774	149859	72591
Beans, barrels	3918	1650	1420	1862	1378
" sacks	4182	5107	15296	8156	3017
Beef, barrels	3829	8093	18903	19119	11423
" half do.	11	167	619	1854	775
" tierces	.....	.....	.....	.....	.....
Beeswax, sacks	337	242	387½	650½	.....
" barrels	55	132	.....	.....	.....
" boxes	43	173	.....	.....	.....
Boots, boxes	6526	11380	27671	19735	27160
" trunks	1221	300	265	680	2800
Brandy, barrels	1096½	2393½	3035	2855	5723
Buffalo Robes	4922	10737	59441	95844	67654
Butter, barrels	1353½	2306½	2135	2181	1926
" kegs	4183	3617	3648	4545½	5349
" firkins	1103	2482	3013	3636	3234
Candles, sperm, boxes.	1914	1639	423	139	496
" tallow, do.	1263	1349	853	2092	2806
Cattle	1806	2792	1892	1819	1376
Cheese, boxes	14039	18486	27286	31340	26385
" casks	543	299	70	422	.....
Cider, barrels	83	317	216½	540½	801
Cigars, foreign, boxes	303	824	353	1098	2605
" domestic	83	233	1241	938	1633
Coffee, sacks	106064	80908	105888	103123	73281
Corn, bushels	1065398	765239	647154	1834689	1016077
Dry Goods, boxes	46515	99868	126925	108583	94162
" packages	742002	721171	586348	480589	362936
" bales	5471	28817	31162	41224	26298
Fish, kegs	467	873	1092	1810	1198
" boxes	1207	2255	2670	4783	5843
" barrels	649	2617	5883	6864	6758

Imports into St. Louis by the river for five years, &c.

[CONTINUED.]

Articles.	1854.	1853.	1852.	1851.	1850.
Fish, half barrels	350	1484	2394	2105	2192
Feathers, sacks.....	1741	1214	1213	1143	1593
Flax Seed, barrels.....	5796	9781	6703	4400½	2348
Flour, barrels.....	153579	193251	136599	194857	326072
" half do.....	300	1612	6572	6324	7321
Furs, packages.....	1855	1487	1793	3051	2180
Gin, barrels.....	18	437	504	939	796
Ginseng, sacks & bbls.	437	327	270	42	877
Hay, bales	18739	19769	15689	23280	25271
Hemp, bales	67599	63209	53331	64607	62798
Hemp Seed, barrels ..	428	493	400	355	750
Hides	46431	92924	107858	99302	86875
Hogs	27776	15611	22822	17885	12226
Horses	477	1141	1375	833	2098
Iron Bars, tons.....	2679½	21486	10056	9387¼	14322
" pig "	11760	8022	9820	6683½	4468
" castings "	192	1666	8737¼	1214	2485
Lard, barrels.....	44252	32490	46020½	60646½	100001
" kegs.....	10001	12747	10119	16227	17133
Lead, pigs	320436	509484	416985	521734	601787
" bars.....	.....	21000	1664	38250	113150
" white, kegs.....	436	747	306	797	8975
" red, do.....	144	47	.....	91	.....
Leather.....	6377	11120	10204	.....	.....
Malt Liquors, barrels..	1014	8837	11324½	8200½	7725
Molasses, barrels.....	50972	53291	60268	40530½	32463
Mules.....	4	212	475	.....	.....
Nails, kegs.....	59280	64051	60435	63736	88813
Oakum, bales.....	836	676	457	1506	2612
Oats, bushels	902726	555391	606397	776041	712617
Onions, sacks & barrels	7071	26523	19471	21897	14629
Oils, Sperm, barrels...	426	305	556	1677	2038
" Castor, do. ...	92	135	226	459	1678
" Linseed, do. ...	392	1132	1858	1201½	2587
" Train, do. ...	693	706	245	384	348
" Lard, do. ...	100	353	139	212	.....
Paper, wrapping, reams	28525	27229	68319	47914	50506
" writing, do. ...	3948	14126	6341	6579	10990
Peaches, green, barrels	114	689	372½	1207	743
" dried, do. ...	1609	860	851	1187	2260
" " sacks.....	15159	9136	4126	4273	5831
Peltries, packages	223	927	1061	1066	1362

Imports into St. Louis by the river for five years, &c.

[CONTINUED.]

Articles.		1853.	1852.	1851.	1850.
Pork, barrels	53195	89079	75483	114899	135662
" half barrels..	11240	1655	1693	3052	7321
" in bulk, lbs..	227328	8172164	9015969	11873645	11474041
Potatoes, bls & sacks	126903	88040	57378	58650	13401
Powder, kegs & can.	5524	8244	13019	14887	18505
Queensware, casks..	1652	1986	1652	2720	3197
" crates.....	1074	1273	2039	2453	2508
Rice, tierces	2215	2879	2848	2579½	3389
" barrels	95	154½	.....	.....	.....
Rope, hemp, coils..	35817	46732	42567	33935	23442
" Manilla, do.	1053	832	1500	1643	5649
" Tarred, do..	124	721	299	.....	.....
Rum, barrels	347½	451	88	198	706
Rye, bushels.....	28143	22097	5571	7656	3468
Salt, dom., fine, bbls	.....	4072	58	444	805
" " coarse "	23595	48301	44980	37200	24219
" Liv. B., sacks	4300	65174	19841	17302	23252
" G. A. do...	250848	96498	198136	119867	159699
" T. I. do...	10841	9766	83176	46694	98038
Sheep.....	2586	2074	4123	6001	2924
Shoes, boxes.....	5332	6281	12364	12057	17022
" trunks	84	298	256	509	2618
Skins	4734	5621	4997	5152	6718
Soap, boxes.....	2263	6199	917	2521	.....
Starch, boxes,.....	2246	3235	2789	.....	.....
Sugar, hogsheads ..	58103	46491	39447	29722	24159
" barrels	4642	15005	14937½	22270	12273
" boxes.....	7036	7916	18442	16098	13926
Tallow, casks.....	48	374	448	376	439
" barrels	687	835	3136½	1175½	809
Tar, barrels.....	2782	8540	13395	10000	1126
" kegs.....	3040	1985	3283	5800	5219
Tin Plate, boxes...	5423	10779	7663	6677	9993
Tea, chests	1287	1110	974	1058	2873
" half chests	7691	1003	1241	2694	5906
Tobacco, hhds.....	9372	8988	13708	10286	9272
" boxes, manu.	5084	8221	16121½	10235	10309
Vinegar, barrels....	15	153	325	755	1134
Wheat, bushels ...	1492914	1318455	1624186	1644861	1863750
Whiskey, barrels ...	48647	44893	50887	48541½	38813
Wine, barrels.....	813	2989	3877	5264½	8972
Wool, sacks.....	965	1554	1312	1684	1509

WHEAT TRADE OF ST. LOUIS IN 1854.

The high prices of wheat in Great Britain, in 1853, and in the early part of 1854, created a demand for exportation from the United States, which left very little of the old crop on hand at the commencement of the harvest of 1854, and though the crop of this year fell but little, if anything, below the average of ordinary seasons, and though there was no considerable export demand, yet other causes conspired to advance the price of the new crop, and sustain high prices in the Mississippi valley throughout the entire year. Among these causes may be mentioned the very short crop of Indian corn occasioned by the severe drought and the great emigration to the new States.

The stock of wheat in the stores and mills, at St. Louis, on the first of January, 1854, was estimated at 130,000 bushels. On the third of January, sales were made at $1.20 per bushel exclusive of sacks, and a considerable lot of mixed, red and white at $1.31 p. bushel sacks included. By reference to the "Annual Review of the Commerce of St. Louis," published at the Republican office, from which we take our facts, it seems that prices remained pretty uniform from the 1st to about the 25th of January, when owing to favorable advices from Europe, prices advanced, and large sales were made during the latter part of the month at $1.45 p. bushel without sacks. Prices continued to range from $1.30 to $1.45 as in quality, until about the 25th of February, when a slight decline took place, and at the close of the month sales were made ranging from $1.10 to $1.25 per bushel. These figures may be regarded as representing the market during the month of March and to about the middle of April, though we find the sale of a lot of white flint on the 29th of March reported at $1.35. Owing to more favorable advices from Europe, received about the middle of April, prices again advanced, and prime qualities were sold as high as $1.50 per bushel—the range of prices during the last half of the month being from $1.20 to $1.50 per bushel as in quality. At the commencement of May, prices again advanced, and we observe a sale made on the 8th of that month for the Ohio river at $1.60 per bushel exclusive of sacks. About the middle of the month, a slight decline took place, and we find the prices ranging at its close at from $1.20 to $1.45, and very choice from $1.45 to $1.53 per bushel. These prices seem to have been sustained until about the middle of June, when the market became dull, and at the close of the month common to good qualities of fall ranged from $1.05 to $1.20, and prime and choice from $1.20 to $1.28 per bushel.

A few lots of the new crop came to market about the first of July, and were sold for milling at from $1.30 to $1.50 p. bushel, but the price soon declined and fluctuated during the month from $1.00 to $1.15 per bushel for the better qualities. These rates

continued to rule until about the middle of August, when they advanced and ranged, with little variation, from $1.30 to $1.45 per bushel for good and prime qualities until the close of the year.

The following table, made up from the Harbor Master's Books, exhibits the quantity delivered at the St. Louis market from the river in each month of the year 1854:

January and February,	10,992	August,	135,339
March,	186,032	September,	170,447
April,	161,438	October,	178,621
May,	147,784	November,	167,007
June,	158,729	December,	110,555
July,	65,970		
		Total	1,492,914

From the "Annual Review of the Commerce of St. Louis."

DRY GOODS.

It is much to be regretted that we have not the same reliable statistical information with regard to the Dry Goods business that is afforded in some of the seaport cities.

The following estimates have been compiled with care, and are as strictly reliable as it is possible to obtain them. We have in this city thirty-two exclusively Wholesale or Jobbing Dry Goods Houses. Many of the merchants dislike the idea of making an expose of their business; but after conversing with some, and obtaining the views of others with regard to the business of individual houses, we think it may be safely assumed that their average sales are at least $300,000 per annum. We have the sales by Jobbers of Dry Goods, which amount to $9,600,000. There are, also, thirty-seven houses, many of which sell almost exclusively to the country both Dry Goods and Groceries, and we think it a close approximation to the facts, to assume their average sales of Dry Goods at $50,000 per annum, each. This gives us $1,850,000, making the sales for the past year $11,450,000. This estimate does not embrace seventy retail houses [many of them ornaments to the city,] that likewise wholesale a large amount during the year.

It is impossible, under the existing circumstances, to arrive at a more satisfactory conclusion, and if our estimate be correct, does it not speak volumes in favor of the stability and solvency of this branch of the trade? For, from sources which we deem equally entitled to confidence, we think we may state the actual capital employed at $5,500,000. Among merchants it is deemed a fair supposition that transactions to three times the amount of capital may be prudently effected; whereas, from the foregoing estimates, it appears the business does not reach that ratio by $5,000,000.

Within the past year there was not manifested among Jobbers a disposition to increase sales; but business was done on a substan-

tial basis, and our merchants passed the commercial ordeal of the last six months unscathed; and this, too, without the aid of banking accommodations; for the $600,000 capital of the Bank of Missouri is totally inadequate to the demands of the community.

The area of trade, within the last year, was materially extended. Arkansas, the Western district of Tennessee, and Western Kentucky, have commenced making their purchases in St. Louis; and we confidently anticipate a large and increased business from these States.

The fact that so large a portion of the retail merchants scattered over the States of Missouri, Iowa and Illinois, obtain their supplies of Dry Goods in this city, will not strike with surprise those who are familiar with the character of our merchants; for, so far as integrity of purpose, energy in the prosecution of business, a high-toned sense of right and wrong, forethought and prudence are concerned, the Dry Goods Jobbers of St. Louis are not surpassed by a like number of merchants in the Union. The high credit they enjoy among Commission Merchants and Importers in the Eastern cities, and the manufacturers of England, Ireland and Scotland, and Continental Europe, clearly demonstrate this. Scarcely a day passes that some Agent of a Foreign House is not seeking orders from them. If the credit of Jobbers of any city in the Union be equal to that enjoyed by our merchants, surely none, in this respect, enjoy a higher position. They thus have it in their power to afford, and do offer to the retail trade tributary to St. Louis, goods upon as favorable terms as they can be obtained from any other point. A mutual confidence, to an unusual degree, exists between the Jobbers and country merchants, and the increased and increasing trade fully demonstrates that the course of policy adopted by the former, has been properly appreciated by the latter.

Although this branch of business, within the past ten years, has increased in an unprecedented degree, it has been done in a legitimate manner and upon a stable substratum. The country in the interior has become more populous, and the trade and growth of the city, have been commensurate with the increased wealth of the country.

With an abundant supply of most of the important staples grown in the country, and these commanding more than a remunerative price to the producer, we have full confidence that this branch of business will steadily and constantly advance.

May not our Dry Goods Jobbers, then, enter the new year with sanguine hopes and flattering prospects of realizing the fruits of their prudential policy?

The Adventures of the Last Abencerage.

From the French of Chateaubriand.

BY I. W. TAYLOR, ESQ.

Continued.

Donna Blanca was descended from a family which drew its origin from the Cid of Bivar and from Chimene, the daughter of Count Gomez of Gormas. The posterity of the conqueror of "Valence la Belle" had fallen, through the ingratitude of the court of Castile, into extreme poverty; so obscure, indeed, had it become, that for many generations the world supposed it to be actually extinct. But towards the time of the conquest of Grenada, the grandfather of Blanca, then the last hope of the once famous house of the Bivars, made himself known not so much by the imposing dignity of his titles, as by the shining proofs of his valor. After the expulsion of the infidels, Ferdinand bestowed upon the descendent of the Cid the confiscated estates of many Moorish families, and created him Duke of Santa Fe. The new Duke established his residence at Grenada, and died whilst he was still young, leaving an only son, Don Rodrigo, father of Blanca.

Donna Theresa de Xeres, the wife of Don Rodrigo, gave birth to a son who received the ancestral name of Rodrigo, but was also called Carlos, in order to distinguish him from his father. The great events in the midst of which Don Carlos had lived from his earliest infancy, and the perils to which he had been exposed almost from the hour of his birth, could but render more grave and severe a character naturally inclined to austerity. He was scarcely arrived at the age of fourteen years, when he followed Cortez to Mexico: he had experienced all the dangers, and been a witness of all the horrors of that amazing series of adventures; and he had aided in producing the fall of the last king of the new world. Three years after that catastrophe, Don Carlos was in Europe, at the battle of Pavie, as if expressly to behold unblemished honor and glorious valor, yield to the stern decrees of unsparing fate. The aspect of a new universe, long voyages upon unexplored seas, and the spectacle of revolutions, and the vicissitudes of fortune, had greatly inflamed the melancholy and religious imagination of Don Carlos: he had entered into the chivalrous order of Calatrava, and, despite the prayers of his father, had renounced marriage, and given up his inheritance to his sister.

Blanca De Bivar, sole sister of Don Carlos, and much younger than himself, was the idol of her father: she had lost her mother, and was entering on her eighteenth year, when Aben-Hamet appeared at Grenada. All seductive charms seemed concentrated in that enchanting woman; her voice was ravishing; her dance more airy than the movement of the zephyr: sometimes she amused herself by guiding a chariot as Armida, and sometimes she flew upon the back of an Andalusian courser, like those bewitching fairies which appeared to Tristran and Galaor, in the depths of the forests. Athens would have taken her for an Aspasia, and Paris for a Diana of Poitiers, whose brilliant reign at court was just begun. But with the charms of the women of France, she combined the glowing passions of the Spanish maiden; and her instinctive coquetry diminished nothing from the firmness, the

constancy, the force and the elevation of the sentiments which filled her heart.

At the cry raised by the frightened Spanish maidens, when Aben-Hamet precipitated himself into their secluded grove, Don Rodrigo rushed forth. "Father," said Blanca, "behold the Signor Moor, of whom I have spoken to you. He heard me singing, and recognised the sound of my voice; he is now here to thank me for having conducted his lost steps to the kan of the Moors."

The Duke of Santa Fe received the Abencerage with the grave but simple politeness of the Spaniards. It is impossible to see among the people of that nation any air of servility, or to recognise any form of expression which indicates abasement of thought or degradation of soul. The language of the grand Signor and of the simple peasant is the same; their salutations the same; their compliments, customs and usages are alike. In the ratio that the confidence and the generosity of these people towards strangers are without limit, is their vengeance implacable and terrible when aroused. Of heroic courage and a patience which no trials can shake, incapable of yielding to misfortune, it is necessary to conquer or be crushed by them. They are not liberally endowed with genius; but sublimated passion supplies the want of subtlety and abundant ideas. A Spaniard who has passed the day in moody silence, who has seen nothing, and cares not to behold anything, who has read nothing, studied nothing, compared nothing, feels ever, in the fierce intensity of his resolves, resources which arm his soul against any adversity.

It was the birth-day of Don Rodrigo, and Blanca gave to her father a "*turtellia*" or little fete, in their enchanting solitude. The Duke of Santa Fe invited Aben-Hamet to seat himself in the midst of the young girls who amused themselves with the turban and robe of the stranger. They brought for him cushions of velvet, and the Abencerage reposed himself upon them, agreeably to the custom of the Moors. Many questions were proposed to him as to his country and his adventures: he replied to all of them with spirit and vivacity. He spoke the purest Castilian, and would have been taken for a Spaniard, except for his habitual use of *thou* in place of *you*. This word had such inexpressible tenderness from his lips, that Blanca could not suppress a secret pang when he addressed it to any one of her companions.

Instantly a multitude of servants appeared, bearing chocolate, pies made of fruits, and little cakes made of Malaga sugar, white as snow and porous as the most delicate sponge. After the service of refreshments, Blanca was entreated to execute one of those dances in character in which she surpassed the most accomplished *guitanas*. She felt obliged to yield to the importunity of her surrounding friends. Aben-Hamet had preserved silence; but his imploring looks spoke more eloquently than words. Blanca selected a *zambra*, an expressive dance which Spaniards had borrowed from the Moors.

One of her young companions commenced upon the guitar the air of the foreign dance. The daughter of Don Rodrigo removed her veil, and attached to her snowy hands castinets of ebony. Her raven hair fell in curling masses upon her neck of alabaster; her lips and eyes smiled in beauteous concert, and her bounding heart suffused her cheek with glowing hues. Suddenly, she rattled the noisy ebony, struck the measure three times, gave the key-note of the zambra, and

mingling her voice with the sound of the guitar, she started like the flash of an electric beam.

What variety of steps! What elegance of attitude! Sometimes she lifted her arms with vivacity of manner, and then permitted them to fall with a gentle languor. Sometimes she sprang forth as if intoxicated with pleasure, and then retreated as though overwhelmed with sorrow. She turns her head, seems to call some invisible presence. inclines modestly one rosy cheek to the bridal kiss of a husband, flies timidly, returns blushing and consoled, moves with a step noble and almost warrior-like, then leaps again upon the flowery turf. The harmony of her steps, with her song and the sounds of the guitar, was perfect. The voice of Blanca, slightly subdued, had that sort of accent which moves the passions of the soul to their profoundest depths. The music of Spain, composed of sighs and active movements, of sad refrains and tones abruptly ended, presents a singular mixture of gaiety and melancholy. That music and that dance fixed forever the fate of the last Abencerage: they were indeed sufficient to disturb a heart less deeply stricken than his own.

At evening they returned to Grenada by the valley of the Douro. Don Rodrigo charmed with the noble and polished manners of Aben-Hamet, was unwilling to separate himself form him, unless the latter would promise to visit him often and amuse Blanca with the marvelous stories of Oriental climes. The Moor filled with ineffable transport accepted the invitation of the Duke of Santa Fe; and from the morrow he presented himself at the palace where lived the being whom he loved more than the light of heaven.

Blanca soon found herself absorbed by a passion rendered profound and consuming for the very reason that she looked upon it as hopeless. To love an infidel, a Moor, an unknown, appeared to her a thing so impossible that she took no precaution to guard against the flame which began to glow along her veins; but as soon as she felt the symptoms, she welcomed the malady with the reckless daring of a Spanish maiden. The dangers and the mortifications which she foresaw, did not make her recoil from the brink of the abyss, nor debate long with her heart. She said to herself: "Aben-Hamet may become a Christian, he may love me, and I would then follow him to the end of the earth."

The Abencerage experienced on his own part all the power of an overwhelming passion: henceforward he lived only for Blanca. He no longer occupied himself about the projects which had brought him to Grenada: it was easy for him to obtain the intelligence which he had come to seek; but any other interest than that which regarded his love had vanished from his eyes. He dreaded even any revelations which might effect a change in the tenor of his life. He asked nothing, he wished to know nothing; he would say to himself: "Blanca may become a Mussulman, she may love me, and I would serve her to my latest breath."

Aben-Hamet and Blanca, thus decided in their resolutions, only awaited a favorable moment to make mutual discovery of their sentiments. It was then the most beautiful season of the year. "You have not yet seen the Alhambra," said the daughter of the Duke of Santa Fe to the Abencerage. "If I may credit certain words which have escaped you, your family is originally from Grenada. Would you be

pleased to visit the palace of your ancient kings? I myself will serve you this evening as guide." Aben-Hamet protested in the name of the Prophet that never could excursion be more agreeable to him.

The hour fixed upon for the pilgrimage to the Alhambra being arrived, the daughter of Don Rodrigo mounted a white jenet which was accustomed to climb the rocks like a roe-buck. Aben-Hamet on an Andalusian courser, caparisoned in the Turkish manner, accompanied the beautiful Spaniard. In the rapid ride of the young Moor his purple robe expanded with the wind, his curved sabre resounded against his saddle, and the breeze agitated the plume of heron feathers which surmounted his turban. The people, delighted with his charming grace, exclaimed on beholding him as he passed: "It is an infidel prince whom Donna Blanca is going to convert."

They followed at first a long street which bears even yet the name of an illustrious Moorish family; that street is terminated by the exterior enclosure of the Alhambra. They traversed then a grove of elms, arrived at a fountain, and soon found themselves before the inner enclosure of the palace of Boabdil. In a wall flanked by towers and surmounted by battlements there opened a gate, called the *Gate of Judgement.* They passed through this first gate, and advanced by a narrow path which wound among high walls and half ruined houses. This path conducted them to the place of the Algibes near to which Charles V. was then building a palace. From there turning towards the north, they stoped in a deserted court at the foot of a wall without ornaments and partially ruined by time. Aben-Hamet leaping lightly to the ground, offered his hand to Blanca to aid her descent from her mule. The attendants rapped at a deserted gate, the sill of which was concealed by the growing grass: the gate was opened, and they suddenly beheld the secret recesses of the Alhambra.

All the charms, and all the regrets of country, mingled with the illusions of love, thrilled the heart of the last Abencerage. Fixed and silent, he looked with astonished eyes into that habitation of the genii; he fancied himself transported to the entrance of one of those palaces of which description is given in the Arabian Tales. Fairy galleries, canals walled with snowy marble and bordered with flowering citron and orange trees, fountains and deserted courts, presented themselves on all sides to the eyes of Aben-Hamet; and through the receding arches of columned porticoes, he beheld still other labyrinths and new enchantments. The azure of the most beautiful sky could be seen between the columns which sustained a row of gothic arches. The walls covered with arabesques resembled in appearance those Oriental stuffs embroidered by pining slaves to relieve the ennui of the Harem. A mingled air of voluptuousness, of religion, and of warlike pomp pervaded the magic edifice; it was a cloister of love, a mysterious retreat, where the Moorish kings tasted all the pleasures, and forgot all the duties of life.

After some moments of surprise and silence, the two lovers entered into this home of vanished power and departed joys. They made at first the circuit of the hall of Mesucar, amid the perfume of flowers and the freshness of living waters. They then penetrated into the Hall of Lions. The emotion of Aben-Hamet increased at each step. "If thou hadst not filled my soul with ecstacy," said he to Blanca,

"with what chagrin must I confess myself obliged to demand of thee, of thee, a Spaniard, the history of these habitations ! Ah ! these places are made to serve as the retreat of happiness; and I !" * * *

Aben-Hamet perceived the name of Boabdil set in mosaics. "Oh my king," exclaimed he, "what has become of thee? Where shall I find thee in thy deserted Alhambra?" And the tears of fidelity, of loyalty and of honor dimmed the eyes of the young Moor. "Your ancient masters," said Blanca, "or rather the kings of your fathers were ungrateful." — "What signifies it?" replied the Abencerage; "they have been unhappy !"

As he pronounced these words, Blenca conducted him into a cabinet which seemed to be the very sanctuary of the temple of love. Nothing could equal the elegance of that retreat: the entire vault painted azure and gold, and composed of open arabesques, admitted the light as through a tissue of flowers. A fountain leaped up in the midst of the edifice, and its rosy waters were received into an alabaster shell. "Aben Hamet," said the daughter of the Duke of Santa Fe, "look closely at that fountain: it received the mangled heads of the Abencerages. You behold yet upon the marble a spot of the blood of the wretches whom Boabdil sacrificed to his suspicions. It is thus, in your country, men are treated who seduce confiding women."

Aben-Hamet no longer heard Blanca; he prostrated himself and kissed with respect the trace of the blood of his ancestors. Raising himself he exclaimed: "O Blanca ! I swear by the blood of these cavaliers, to love thee with the constancy, the fidelity and the ardor of an Abencerage."

"You love me then !" replied Blanca, joining her beautiful hands, and lifting her eyes to heaven. But do you recollect that you are infidel, Moor, and enemy; and that I am christian and Spaniard?"

"Oh holy Prophet," said Aben-Hamet, "be thou witness of my vows !" * * * Blanca interrupting him asked: "What faith can I place in the vows of a persecutor of my God? Do you know whether I love you? Who has given you assurance to address me thus?"

Aben-Hamet, in dismay, replied: "It is true, I am but thy slave; thou hast not chosen me for thy cavalier."

"Moor," replied Blanca, "drop the deceit; thou hast seen by my looks that I love thee: my madness for thee passes all limit; be thou Christian, and nothing shall hinder me from being thine. But if the daughter of the Duke of Santa Fe dares speak to thee with this frankness, thou canst judge from it, that she knows how to conquer herself, and that an enemy of Christians shall never have right to command her."

Aben-Hamet, in a transport of passion, seized the hands of Blanca, placed them upon his turban and then upon his heart. "Allah is great," exclaimed he, "and Aben-Hamet is happy! Oh Mahomet! that this Christian may know thy law, and that nothing may * * * * "Thou blasphemist," said Blanca: "Let us go hence."

She supported herself on the arm of the Moor, approached the Fountain of the Twelve Lions, which gives its name to one of the courts of the Alhambra: "Stranger," said the naive Spaniard, "when I look upon thy robe, thy turban, thy arms, and think of our loves, I fancy that I behold the shade of the handsome Abencerage walking in

this deserted retreat with the unfortunate Alfaima. Explain to me the Arabic inscription graven upon the marble of that fountain."

Aben-Hamet read these words:

The fair princess, covered with pearls, who walks in her garden, adds so largely to its beauty * * * The remainder of the inscription was effaced.

"It is for thee that this inscription has been made," said Aben-Hamet. "Beloved Sultana, these palaces were never so beautiful in their freshness as they are this day in their ruins. Listen to the noise of the moss-covered fountains; look at the gardens which are seen through these crumbling arches; behold the day-star which sets beyond these columned porches: how pleasant it is to wander with thee in these places! Thy words, like the roses of Hymen, embalm these soft retreats. With what charm do I recognize in thy language certain accents of the tongue of my fathers! the mere rustle of thy robe upon these marbles thrills my heart. The air is perfumed only because it has kissed thy tresses. Thou art beautiful, as the genius of my country, amid these ruins. But can Aben-Hamet hope to win thy heart? What is he to thee? He has roamed over the mountains with his father; he knows the plants of the desert * * *; alas! there is no plant can cure him of the wound which thou hast made! he bears arms, but is no longer cavalier. I said to myself in other days: The water of the sea, slumbering in sheltered repose in the crevice of the rock, is tranquil and silent, while near by the great sea is agitated and resounding. Aben-Hamet, thus shall be thy life, silent, peaceful, obscure in an unknown corner of the world, whilst the court of the Sultan is torn by the storm. This I said to myself, young Christian, but thou hast proven to me that the tempest can also disturb the drop of water in the crevice of the rock?"

Blanca heard with rapture this language new to her, and of which the Oriental tone so well accorded with the fairy home through which she wandered with her lover. From a thousand sources love poured into her heart; her trembling knees were sinking; and she was obliged to lean more heavenly on the arm of her guide. Aben-Hamet sustained the gentle burthen; and as they advanced, repeated: "Ah! why am I not a brilliant Abencerage!"

"Thou wouldst please me less," said Blanca, "for I should be more disquieted: remain obscure, and live for me. Often a famous cavalier forgets love in the pursuit of glory."

"Thou couldst not have this danger to fear," replied Aben-Hamet with emotion.

"And how wouldst thou love then, if thou wert an Abencerage?" said the descendent of Chimene.

"I would love thee," replied the Moor, "more than glory, and only less than honor."

[To be continued.]

THE

WESTERN JOURNAL

and Civilian.

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ARTICLE I.

Party Issues.

THAT the Western Journal might be entitled to the respect and confidence of every class of readers, we entered on its publication with a mind resolved to abstain from the discussion of all party issues; but we confess we did not foresee and fully appreciate the difficulties involved in this part of its programme. The apprehension of trespassing on party grounds, and of being regarded as advocating the cause of a party rather than the true merits of a subject, has often been the occasion of embarrassment in the selection and treatment of topics for publication. And from a review of what we have written and published, we are persuaded that the desire to avoid party questions has led us too frequently perhaps into the discussion of elementary and abstract principles, and abridged in some measure the usefulness of our labors.

Hence, though we have no design of making the Western Journal and Civilian a party work, we propose in future to exercise more freedom in the selection and discussion of subjects relating to public measures, and should our views of State or national policy lead us into the ranks of a party, we shall be pleased to have its co-operation in carrying them out. Indeed, unless one has acquired a reputation for extraordinary wisdom and virtue, his views and opinions touching public matters, though just and eminently practical, are of little weight in the estimation of the people without the endorsement of a party.

Though wise and good men may deprecate the necessity which compels them either to choose a party or yield the direction of public opinion to selfish speculating politicians, yet this necessity is a development of republican institutions arising from a law of

man's individual and social nature. Age and wealth are conservative. Youth and poverty are progressive. These conditions are coeval with the race of man, and constitute the natural basis of political parties in free governments. But in a country like the United States embracing twenty degrees of latitude, and extending from east to west across a broad continent, its climate and natural resources greatly diversified, and inviting its inhabitants to adopt a variety of pursuits, other party elements must necessarily be developed giving rise to new issues and much complexity to party creeds. So long, however, as these incidental issues are discussed and acted on with a view to the common welfare and conservation of the true principles of our national and State institutions, they produce a salutary effect by causing the people to be more vigilant in regard to the administration of public affairs. But if sectional or religious prejudices, individual ambition or desire for the emoluments of office, constitute the grounds or principal elements of party issues, they depart from the just principles of republican institutions, and deserve the cendemnation of every citizen. And should a party succeed in obtaining the control of the government upon any such grounds, it would be guilty of violating the just rights of the American people, and acquiescence in its rule beyond the legal period for which it was installed, would be a virtual abandonment of those principles which are necessary to sustain and perpetuate our free institutions.

A review of the political history of this country, for some years past, will show that the two great parties, though claiming to be national, have become so much demoralized in their respective ranks, that a thorough reformation upon more national grounds must necessarily take place to save them from dissolution.

Issues arising from sectional prejudices, fanaticism, and other questions of no practical utility, skilfully introduced and kept before the people by designing politicians, have mingled with and vitiated the sources of legislation until men have not only lost respect for their party, but also veneration for the government, and in some measure even their selfesteem. We need no stronger evidence in proof of these assertions than the secret political associations recently formed in perhaps every State in the Union. Though stultifying themselves by assuming to know nothing, the individuals belonging to these associations intimate that they have measures in view which are calculated to reform the abuses of the times,

restore prosperity to the country, and establish its institutions upon a more permanent foundation. If indeed such be the ends aimed at, and the means of attaining them be just and honorable, they will be entitled to the lasting gratitude of the American people. But why seek concealment like deserters from an army or conspirators plotting against the government? Has the time come when freemen—American citizens—dare not openly declare their opinions upon subjects involving the welfare of the nation? No member of the fraternity, we imagine, will admit that he joined this new party because he was afraid to express his opinions in public, and vote at the polls with the independence of a freeman. Then why descend from the exalted dignity of American citizens, and attempt to obtain their objects by resorting to practices at war with the principles of our institutions? Secret associations entered into for the attainment of political ends, should be denounced and deprecated by every patriot. By the pledges and oaths required to bind them together, they assume grounds antagonistic to the body of the community, and close their minds against all argument. The members having been ensnared by appeals to their prejudices dare not listen to argument or reason; for they are pledged, perhaps sworn, to assist in accomplishing certain ends irrespective of the opinions or interests of the rest of their countrymen. Many good men have doubtless entered into these associations without reflecting on their nature or the consequences of their own conduct, and though this can scarcely be admitted as an apology, it is the best perhaps that can be made for their indiscretion.

Whatever may have been the motives impelling men to join these associations, their organization may be regarded as the most remarkable and startling social phenomenon of modern times. The event affords matter for a new chapter in the political and social history of the country, one that may be read and studied with profit by politicians as well as statesmen. It will teach the mere party politician that, though he may prosper for a time by a skilfull combination of party questions, there is a point beyond which he cannot proceed without forfeiting the confidence and support of his constituents, and it will suggest to the statesman the importance of observing more closely the physical and social developments of the country, and of conforming his views of public policy to the changes which occur.

The principal issues which interested the country some twenty

years ago, are either obsolete, or have been so modified, by connecting them with sectional and personal questions, that they have lost much of their national character;—nor have others sufficiently broad and well defined to constitute grounds for national parties to act on, been adopted in their stead. Assuming that in the present state of civilization parties are necessary to the safety and just administration of republican governments, it follows that they should be based upon national grounds, and so nearly balanced as to ensure a proper degree of vigilance on the part of the people, and call into public service the best men of the country. But parties cannot exist without issues, and upon the selection of these depend, in a great measure, the prosperity of the nation and the renown of its statesmen.

Impelled by a sense of the duties arising from our vocation as public journalists, we have from time to time discussed a variety of subjects which we deemed worthy of the adoption and support of American statesmen; and without reiterating arguments heretofore published, we propose in the present paper to complete our programme of public measures.

First, the encouragement and protection of American industry by a well digested system of tariff regulations, which shall limit the revenue from imports to the current expenses of the government.

Second, the relinquishment of the public lands to the States in which they lie, upon such terms and conditions as will secure to the general government the return of the money expended in their purchase and survey.

Third, the improvement of western rivers.

Fourth, a reasonable appropriation in aid of the construction of a railway from the western boundary of some one of the valley States to California.

The first of these measures has frequently been discussed in the preceding volumes of this work, and more recently in the February and March numbers of the present volume, to which we respectfully invite the attention of our readers. It is by no means a new issue, for it has been before the people in some form or other ever since the adoption of the constitution of the United States. But unfortunately sectional prejudices have had too much influence to admit of calm and wise legislation on the subject, especially for the last quarter of a century.

The Public Lands. We have discussed this subject in all its aspects, and though by a late act of Congress one of the objections to the old system has been removed, yet others of even greater weight remain. In our last paper, on this subject, we indicated the changes which we believed should be made in the present law. We then said: "We are the advocates of a law graduating the public lands by a scale that will reduce the price to twenty-five cents per acre at the end of ten years at most from the time they are offered for sale, and, when they shall have remained one year at this price and not sold, they shall become the property of the States in which they are situated. In the meantime, we would transfer the management of the surveys and sales to the respective States upon such terms as would be just and reasonable between the parties.*"

It is very remarkable that States, so jealous of their rights as some are, should allow the general government to hold and exercise control over large portions of their territory for an indefinite period without making earnest, unceasing efforts to change a system which limits the exercise of one of the essential functions of sovereignty—the right of taxation.

But more than this, we hold that the claim to unappropriated lands by Congress as the price of admitting new States into the Union, is unjust, inconsistent with the principles necessary to constitute a sovereign State, and not required, if indeed it be authorized by the constitution. But the new States having consented to the terms demanded, we would raise no issue on this ground, leaving them to abide by the terms of their contract, it affords nevertheless a proper argument in favor of relinquishing the public lands to the States in which they lie upon fair and reasonable terms. But in respect to the admission of new States in future, we hold that a policy more consistent with the principles and spirit of the Federal and State constitutions should be adopted. The constitution of the United States provides that "Congress shall have power to dispose of and make all needful rules and regulations respecting the territory or other property belonging to the United States; and nothing in this constitution shall be so construed as to prejudice any claims of the United States or of any particular State."

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* Vide vol. XII, page 382.

Congress may dispose of territory or other property belonging to the United States. The words "dispose of" embrace every manner of alienation, whether by exchange, sale, gift, or even by casting away. Now, keeping in view the nature of a State government, does not an act of Congress authorizing the people of a territory to form a constitution amount to a proposition to dispose of the territory, including the property in the unappropriated lands, provided they adopt a republican form of government which shall be accepted by Congress, and does not the admission of the new State into the Union, on an equal footing with the old States, consummate the disposition, and vest the new State with the eminent domain? Else, why has Congress, in acts authorizing the admission of new States, provided that they should set up no claim to the unappropriated lands, and, if the consequences of admission without such proviso be what we have supposed, are not the legitimate claims of the new States prejudiced by the act of Congress, depriving them of such unappropriated lands? We confess we are not prepared to answer these questions in the affirmative, but are persuaded that a thorough investigation of the subject will show that the claim of the United States to the unappropriated lands in the new States is not sustained by the constitution, as modified by the principles of national law. The subject is one not only involving the principles of State rights, but deeply affecting the interests of the States which may hereafter be admitted into the Union, and if it should attract attention, we may be induced to give it a more thorough investigation.

One of the principal evils of the present land system is its influence upon other subjects of legislation in Congress. To show the magnitude of this influence and its consequences, we make the following extracts from speeches delivered in Congress by some of the most eminent Statesmen of the country:*

"John Randolph, of Roanoke, speaking on this subject in the Senate of the United States, in March, 1826, said:

"I wish that every new State had all the lands within the State, that, in the shape of receiverships and other ways, these States might not be brought under the influence of *this ten miles square.* In other words, I wish that all the patronage of the land office was in the hands of the individual States, and not in the hands of the general government. I am the friend of State rights, and will cut down the patronage of this general government, which has increased, is increasing, and must be diminished; or we—the States—shall be not only 'shorn of our beams,' sir, but abolished quite"

Mr. Van Buren, in May of the same year, in the Senate, said: The public lands "had extended the patronage of the government over the States to a great extent;" and "subjected" those in which they were

* Extracts from the speech of Mr. Perkins, of La., in the 33d Congress.

situated "to an unwise and unprofitable dependence on the federal government. No man could render the country a greater service than he who should devise some plan by which the United States might be relieved from the ownership of this property by some equitable mode." He would vote for a proposition on such terms.

In 1830, Mr. Hayne, in the Senate, said:

"More than one-half our time has been taken up with the discussion of propositions connected with the public lands, and more than one-half our acts embrace provisions growing out of this fruitful source."

In 1839, Mr. Calhoun said, the discussion about their disposition consumed one-third of the time of Congress.

Mr. Speaker Boyd, in answer to an inquiry made by me, under date of May 21, 1854, says:

"I state as my deliberate opinion that during the sixteen years I have served in Congress, at least one-third of the entire time of that body has been consumed in the consideration of questions connected in one form or other with our public land system."

The Clerk of this House, Colonel Forney, in a note in reply to an inquiry made on the subject, says:

"Fifteen hundred columns of the Congressional Globe and Appendix for the Thirty-Second Congress are taken up with debates on public lands; and the expense to the government incurred alone by the time consumed was $143,520."

Improvement of western rivers. This measure has been so long before the country, and so fully discussed, that we submit it with the simple remark that the action of Congress on several occasions has been in favor of its adoption, and that its consummation seems to depend only upon the selection of a president who will not oppose the wishes of the people.

Pacific Railway. It would be difficult for us to say anything on this subject without reiterating what we have written and published in the preceding volumes of our journal. Did we believe that a sufficient amount of individual capital could be enlisted in the enterprise to ensure the completion of the work within a reasonable period, we would cease to claim the aid of the general government, but as we have little hope of such an event, we think the friends of the measure should persist in their efforts to obtain aid from Congress. And to guard against speculation and the disappointments and delays arising from false estimates of lands along the route, we hold that whatever assistance the government may afford should be in money.

These are our leading active measures, they are national—eminently American—and all point to the development of the national resources, to the protection of American industry, to the rights and dignity of the States, to the glory of the nation. We present them upon their merits, they claim the sympathy and support of the

American people, and are, in our estimation, sufficiently broad to constitute the platform of an American party.

But to give solidity and steadiness to parties, they must possess conservative as well as progressive elements, for there are many subjects upon which all parties must agree. Trivial and immaterial issues raised by designing politicians embarrass legislation, and should never be admitted into the creed of a national party. The local interests of a particular district may constitute a legitimate subject of legislation, but sectional prejudices and the hallucinations of fanaticism should be excluded from the hustings and the halls of legislation as the worst enemies of republican governments.

Congress and the State Legislatures having adjourned, and there being no important canvass going on before the people, the present time is eminently favorable to a calm investigation of subjects relating to the public welfare, and the people should not allow it to pass away without improvement. But to make the season fruitful in good results, we must have free, open discussion; not secret conclaves; broad rational views challenging investigation; not selfish, narrow devices to ensnare the unwary, and cut off argument.

The new social developments continually produced by the operations of a republican government, require unceasing observation, and consequently the wisdom of one age is but an imperfect guide for the next in succession. And hence the necessity of "eternal vigilance" on the part of a people who would themselves be free and transmit unimpaired the blessings of a free government to their offspring.

ARTICLE II.

An Essay on the Preservation of Universal Peace.

BY HON. A. BEATTY.

Continued from page 248.

IV. Another subject proposed to be considered is the danger arising from the annexation of foreign territory, containing a large population, speaking a different language, and having customs and manners greatly varient from our own.

All history proves that great empires, which have been rapidly extended by foreign acquisitions, instead of being strengthened,

have become much less able to defend themselves against the encroachments of surrounding nations. The great extent of their frontier boundaries, and the numerous points on which they can be assailed, renders it necessary that they should keep up a standing military force to guard every assailable point. When a nation is obliged to resort to a *standing army* for its defence, it soon ceases to have a military force of *citizen soldiers*. The standing army soon becomes so *inefficient* for the want of that *patriotism and love of country*, which animates the citizen soldier, as to render it necessary to double their numbers, in order to make up for their want of that ardor of patriotism and heroic bravery which enabled the Grecian and Roman citizen soldiers to accomplish such wonders in the military art.

The necessity of keeping up constantly a standing military force, each year increasing in numbers, produces a necessity for enlisting soldiers of all descriptions, and of the very worst materials, to make up for losses by wars and other calamities, and thus the army becomes more and more *inefficient*, and such inefficiency must be compensated by increasing the *numbers* of the standing army. These worthless soldiers must all be subsisted by the country. Thus the inhabitants are oppressed by excessive taxes, and the country is more and more enfeebled, until it is finally overthrown and conquered by some far less numerous but more energetic nation, and with greatly inferior resources. Thus the Babylonian empire fell an easy prey to the more energetic and war-like Medes and Persians, though comparatively feeble in point of numbers and military resources.

The boundaries of the Medes and Persians were rapidly extended, and the pecuniary resources of their empire soon became immense. If its power were estimated by the extent of its dominions population and pecuniary resources, it would be considered, in the zenith of its greatness, as more powerful than any nation then on the earth. But as its several parts were composed of discordant materials, and its boundaries were so widely extended as to expose numerous assailable points to the surrounding nations, it became more and more difficult, and required a continually increasing military force, and a consequent increasing revenue, to guard the frontier against the assaults of the surrounding nations. Disaffection was the natural consequence of oppressive taxes and military exactions, and hence the government became more and more enfeebled, and was completely overthrown and subdued by the Greeks and Macedonians, 207 years after Cyrus had subdued the Babylonean empire.

Alexander the Great, at the head of a Macedonean and Grecian army, invaded this great empire in the year 334 B. C. His march through the extensive dominions of the Medes and Persians, was one continual triumph, by whom their great empire was totally subverted, in the space of three years.

This new empire possessed all the inherent defects of that which had been so easely overthrown. No effective measures were adopted to produce a coherence of the several parts—the boundaries were even more extensive than those of the Babylonian or Persian empire. In a few years after the death of Alexander, it was split up into four or five kingdoms; and these were almost continually engaged in wars with each other. Thus this mighty empire became more and more enfeebled, and prepared the way for its complete conquest by the Romans within about two hundred years after the death of Alexander the Great.

The Roman Commonwealth was subverted, and the gigantic empire, which took its rise under Augustus Caesar, may, by some, be considered an exception to the causes which proved destructive to the preceding empires—the Babylonian, the Medes and Persian, and the Greek and Macedonian. But if the circumstances under which the Roman Commonwealth rose from a very small beginning to such overwhelming power and greatness, are carefully examined, it will be found that this forms no exception to the reasoning applicable to the rise and fall of the other great empires of the East.

As applicable to this subject, I quote the following passage from a very able work of an American citizen, entitled "Philosophy of the plan of salvation," p. 32: "The natural tie of consanguinity, or a common parentage, is a strong bond of affiliation among men. And there are others which, in some cases, seem to be even stronger than this; among them may be named a common interest, a common religion, and a common fellowship in suffering and deliverance. Any circumstance which educes the susceptibilities of the mind, and twines them together, or around a common object—any event in which the interest, the feelings, the safety or the reputation of any people is involved, causes them to be more closely allied to each other.

The more firmly a people are bound together, by these ties of union, the more strength they will possess to resist opposing interests and opinions from without; while, at the same time, everything national, or peculiar to them as a people, will be cherished with warmer and more tenacious attachment.

From the operation of this principle originates the maxim "*Union is strength;*" and whether the conflict be mental or physical, the people who are united together by the most numerous and powerful sympathies, will oppose the strongest and longest resistance to the innovations of external forces. On the contrary, if the bonds of moral union are few and easily sundered, the strength of the nation is soon broken into fragments, easily repelled from each other.

According to this principle, in all cases in which a whole nation are to be instructed or prepared for offence and defence, or in any wise fitted to be acted upon, or to act as a nation, it would be ne-

cessary that the bonds of national union should be numerous and strong; and that, as far as possible, a perfect oneness of interest and feeling should pervade the whole nation."

This passage points out forcibly and clearly what constitutes the "*strong bond of affiliation among men*," and proves that the more firmly "a people are bound together *in union, the more strength they will possess*," that a people "*who are united together by the most numerous and powerful sympathies*, will oppose the *strongest* and the *longest resistance* to the aggressions of external forces. On the contrary, if the bonds of moral union are weak and *easily sundered*, "the strength of the nation is soon broken, and the fragments easily repelled from each other." When a whole nation is to be instructed and prepared for offence and defence, it is necessary that the bonds of *national union* should be numerous and strong, and as far as possible, that a *oneness of interest and feeling* should pervade the entire body of its citizens.

Now, although the Roman republic after the reign of their kings arose from a very small beginning, and gradually increased in power and resources, by uniting to itself, one after another, the small communities by which it was surrounded, yet this was not a work of haste. By a wise and gradual process, taking care to secure to the several communities annexed to the Roman republic the rights and privileges of Roman citizens, allowing ample time for the amalgamation and affiliation of the several parts, a firm national union, and a "oneness of interest and feeling," was produced throughout the republic.

At the period of the abolition of the Regal government, which had subsisted 244 years, the territories of the Romans were very limited. They embraced only a very small portion of Italy. The chief use which they had made of their victories, was to naturalize the inhabitants of the conquered communities, and thus to increase the number of Roman citizens. "Their strength being always superior to their enterprises, they laid a solid foundation" for their republic.

Although such a "oneness of interest and feeling" among the Romans existed in relation to foreign nations, yet, at intervals, dissentions arose between the Patricians and Plebeians, in consequence of the superior privileges claimed by the former in the administration of the government. These dissentions sometimes led to disastrous results in so much that Rome in the year 390 before the Christian era fell a victim to the Gauls, and was plundered and burnt to the ground by a barbarian army, under the command of Brenno. In process of time the unhappy dissentions between the Patricians and Plebeians were healed by the wise admission of the latter to equal privileges with the former; and these same Gauls, twenty-three years afterwards, in another invasion of the Roman republic, were defeated, and compelled to retreat with the utmost precipitation.

The Roman State was founded by Romulus, 753 years before the birth of Christ. The last of the hostile communities of Italy, after the total defeat of Pyrrhus, with the loss of 26,000 men, the year before, submitted to the Romans 480 years from its foundation, and 273 before the Christian era.

The power of the Roman republic had now extended over all Italy; and if it had been content to remain within its natural boundaries, and to preserve the institutions which had given it such pre-eminence over all other nations, especially after the Plebeians had been allowed to participate with the Patricians in eligibility to the highest offices of the republic, it could have bid defiance to all the powers on earth. On every side it was surrounded by the Mediterranean and Adriatic seas, except on the west and north-west, where it was bounded by almost impassable mountains. Thus hemmed around by such well defined and secure boundaries, it could easily have defended itself against any power by which it could be assailed. If the Roman republic, thus secure on all sides, had adopted and persevered in the wise policy of not engaging in foreign wars, and of making no further acquisitions of territory, it would have enjoyed an almost perpetual exemption from war, and a degree of prosperity and happiness under her republican institutions far exceeding that of any nation or republic which had heretofore existed. It might have exhibited a glorious example to the world of a nation, enjoying the highest degree of prosperity, and proving that all wars, except those of *defence alone*, were *unnecessary*.

But the full command of Italy and Sicily, and its perfect security against the assaults of foreign nations, did not satisfy Roman ambition. The Romans now began to look abroad for new fields to display their superior power and skill in war. The first war with the Carthagenians terminated 242 years before the Christian era. The second, in which the great Hannibal displayed such wonderful military talents, after a desparate contest of many years, was terminated by a peace, 201 years B. C. The third war with the Carthagenians commenced 149 years B. C., and ended with the total destruction of the city of Carthage by fire and sword, and the complete overthrow and conquest of the nation, 146 B. C. In the same year, the overthrow and ruin of the Grecian republics was effected. A few years before—197 years B. C.—Philip of Macedon was defeated, and compelled to become a tributary of Rome. Other kingdoms soon shared the same fate, some becoming tributary, and others being *annexed* as conquered *provinces*, the fate of all of them in process of time.

This fatal system of foreign wars and annexation of conquered countries as provinces, by the Roman Republic, was attended with the most fatal consequences. The great extent of the Roman boundary brought them in contact with many surrounding nations. To defend these distant and widely extended frontiers, and to keep

in due subjection their subjects in the conquered provinces, *standing armies* became necessary, and these constantly increased, in proportion as the boundaries of the victorious republic were extended on every side. This unwise system was followed by the most lamentable consequences: among others it led to desperate struggles between military leaders at the head of armies in the service of the republic. First between Marius and Sylla; then between Lepidus and Pompey; and finally between Pompey and Julius Caesar. The latter having triumphed over Pompey, was declared perpetual *Dictator*, in the year 48 B. C. Thus in less than one hundred years from the conquest of Carthage, the Roman republic was completely subverted, and all power vested in a *perpetual Dictator;* that is, was substituted by an *absolute despotism.*

Four years after Julius Caesar was raised to the supreme power he was stabbed at the foot of Pompey's statue by Brutus and Cassius. But this did not restore the republic. Marc Antony, Octavius Caesar, the grand nephew of the late Dictator, and Lepidus formed a triumvirate to resist the attempts of the republican party to restore the republic. An engagement, at Philippi, decided the fate of the empire, the republican party having been completely overthrown. Thus the military power tore down the republic, and *despotism* was again triumphant. But the triumvirs soon fell out among themselves, and another civil war ensued. Lepidus was first deposed. Octavius and Marc Antony soon after fought the great battle of Actium, in which the former was victorious, and thus became master of the Roman empire, every vestige of the republic having been destroyed. During these convulsions, there was immense sacrifice of lives and property in the contests of the different military leaders, and a complete overthrow of the Roman republic, all occasioned by foreign conquests and the annexation of the conquered dominions to the Roman commonwealth.

Julius Caesar was declared perpetual Dictator, 48 years before Christ, and fourteen years thereafter his grand nephew, Octavius, became master of the Roman world, under the title of emperor.

If we examine the rise and progress of the Roman republic from its foundation [including the reign of its kings,] 753 years B. C. during a period of 480, when it had united the last of the opposing communities within the peninsula of Italy, it is very obvious that, if the republic had refrained from foreign wars, and confined its efforts to the complete amalgamation and union of all the separate principalities of Italy into one homogenious commonwealth, by permitting all to participate in the principles of equality with Roman citizens, and had preserved her celebrated military institutions and her energetic preparations for *defensive war*, no power could ever have invaded Italy with any hope of success. Surrounded as the republic was, at the period alluded to, by the Mediterranean and Adriatic seas, and by almost impassable mountains, on the only

side by which an enemy could approach by land, she would have been perfectly invulnerable. The knowledge of this fact by the surrounding nations would have restrained them from any attempt to invade the territories of this celebrated republic. If it had availed itself of these circumstances, and acted with wisdom and prudence, it might have set a noble *example* to all the surrounding nations, that *wars of defence only* were necessary; and that *even these*, by the exercise of moderation and prudence, might be wholly dispensed with. In such a condition of things, Italy would have enjoyed a degree of liberty, prosperity and happiness incomparably greater than any nation on earth had before that time ever enjoyed.

But, unfortunately, her ambition *led* her to engage in *foreign wars* and the *annexation* of conquered territories to her already sufficiently extensive dominions, and behold the consequences!

A republic, which arose from very small beginnings, under a monarchical form of government for 244 years, and then a republic, in all 480 years, was eminently successful and flourishing. But from the time it engaged in foreign wars, it existed less than two hundred years, when the republic was subverted by Sylla, and 34 years thereafter was totally overthrown, and an *absolute despotism* established in its place by Julius Caesar. But the evils of foreign wars and the annexation of foreign territory did not end here. Octavius Caesar, guided by the counsels of the wise Mecaenas, had a prosperous and successful reign of forty-four years. He died the 14th year of the Christian era. The emperor Augustus, the title assumed by Octavius Caesar, was succeeded by 7 emperors, whose entire reign extended to the 69th year of the Christian era, embracing a period of only 55 years, or an average of about 8 years each. The character of Nero, one of the 7 successors of Augustus, is described in history to be "a compound of every thing that was base and inhuman." Galba and Otho, two of the seven, reigned less than a year between them. The elegant historian Gibbon* dispatches their history, and that of Vitellius, in three lines. "The rapid downfall of Galba, Otho and Vitellius taught the armies to consider the emperors as the creatures of *their* will, and the instruments of *their* license." And in three more lines gives an outline of the characters of six of the immediate successors of Augustus: "The dark unrelenting Tiberius, the furious Caligula, the feeble Claudius, the profligate and cruel Nero, the beastly Vitellius, and the timid, inhuman Domitian, are condemned to everlasting infamy." Under such emperors "Rome groaned beneath an unremitting tyranny, which exterminated the ancient families of the republic, and was fatal to almost every virtue and every talent that arose in that unhappy period."

* Gibbon's Rome, I. vol., p. 85.

Galba was murdered by his soldiers, and Otho died by his own hand; and Tiberius, Caligula, Claudius and Vitellius, all came to violent deaths. During these short and miserable reigns the Roman empire was constantly engaged in foreign wars and civil commotions. Although the affairs of the empire were much better administered during the reign of Vespasian (an able General who had usurped the throne of the Caesars,) and his amiable and talented son, Titus ("*Delicius humani generis*,") yet it is quite evident that the seeds of decline had been sown broad cast over the widely extended dominions of the Roman empire. That empire included all Europe, south of the Danube, and west of the Rhine, all Asia, west of the Euphrates, and the whole of the civilized part of Africa, yet so feeble had this great empire become in the year 410, that Italy, and even the capital, Rome, could not be protected against the invasion of the barbarous hordes, under the command of Alaric, by whom Rome was taken and sacked.

The third, Valentinian, was put to death by his soldiers. He was succeeded by Maximus, who had stimulated the soldiers to murder Valentinian, and married his widow Eudoxia. He did not long enjoy the fruits of his abominable crime. Within three months he was driven from his throne, by Genserick, king of the Vandals (who had been invited by Eudoxia to avenge the murder of her first husband). The fugitive was pursued, taken and put to death, and his body was thrown into the river Tiber.

After a succession of several weak emperors, Romulus, surnamed Augustulus, was raised to that dignity, under whose reign the Western Empire *came to an end.* Odoacer, prince of the Heruli, conquered Italy, but spared the life of the reigning emperor, on condition of his resigning the throne. This event occurred in the year 476, and thus terminated the western empire.

Such was the miserable end of the Roman republic, brought about by *unnecessary wars*, and the fatal ambition to make foreign conquests, and the annexation of those conquests to the already sufficiently extensive dominions of the Roman Commonwealth.

The history of the Eastern Empire exhibits, if possible, more bitter fruits of the unwise policy of engaging in *unnecessary wars*, and the acquisition and annexation of foreign territory, than the western. Every addition of such territory served only more and more to enfeeble the eastern empire, and to render its administration more difficult and corrupt. It soon became too weak and inefficient to afford effectual protection to its numerous and distant provinces. These, one after another, were subdued by the surrounding nations—Persians, Saracens, Turks, Bulgarians, &c.—until scarcely anything was left but the great capital, Constantinople. Finally this was assailed and conquered by the Turks, and thus miserably terminated the Eastern Empire.

The preceding sketch of the rise, progress and fall of the Roman republic, and the Western and Eastern empires, which sprung up

after the republic was overthrown, will afford useful lessons to the people of the United States. If they will wisely profit by those lessons, they are destined to enjoy in perpetuity the best system of government that the wisdom of man has ever devised. Like the Roman republic, our country is so situated as to have a large portion of its frontier secured on the west by the Pacific ocean, and on the east and south by the Atlantic and Gulf of Mexico. On the north our boundary is such an admirable one, and so easily defended, that in our infancy, when our population was only about one tenth of what it now is, Great Britain with her immense power by sea and land, was not able to penetrate that impregnable barrier. In attempting to do so she lost the great army of Burgoine (great compared with our then weakness,) with which she attempted to pass from the waters of the St. Lawrence to the Hudson river. With our present population and resources an attempt at invasion from that quarter, would be considered perfect madness; and would be repelled without any serious effort. We may with perfect confidence put ourselves entirely free from any *attempt* at invasion from that quarter. But we have a still further assurance that no danger of warlike operations will ever disturb our northern frontier.

The war of the Revolution and its result proved to Great Britain that she can never hope to make any serious impression upon our territory by land. But, relying upon her great naval power, she attempted, by the war of 1812, and her preceeding practice of impressing our seamen and harrassing our commerce, and by numerous illegal, unjust and vexatious restrictions, to break down and destroy the United States as a commercial nation.

In this effort she also most signally failed. Instead of destroying, her efforts served only to build up and extend our national and commercial marine. Our navy consisting of national ships and privateers, everywhere issued forth and spread themselves upon every sea, committing havock and destruction upon British commerce, even meeting and vanquishing British ships of war whenever there was anything like an equality of force. This success soon convinced the statesmen of Great Britain that a naval war was as destructive to her interests as a war by land; and she was soon brought to the conviction that *peace* with the United States was her *true interest.* Peace was concluded on terms satisfactory to both nations, December, 1814, and that peace has been preserved forty years. Great Britain has learned, by the result of this "second war of Independence," that our *rights* neither by sea or land can be invaded with impunity, and we may with the utmost certainty conclude that, if we pursue a wise, moderate and liberal course toward Great Britain, we shall never have occasion to go to war with that nation again.

Our other limits, extending from the Gulf of Mexico to the Pacific ocean, binds altogether upon the Mexican empire. The Mex-

ican nation compared with the United States, is so very feeble that we have nothing to fear from her. Disturbances may sometimes arise from unlawful expeditions, set on foot on one side or other, of the boundary between them, with a view of invading the adjacent territories for plunder or other unlawful purposes. These expeditions are generally set on foot so secretly, that the governments cannot obtain information of their existence until an actual invasion of the territories of one of the parties is effected. All interruptions and unfriendly feelings excited by such preditory expeditions, can be easily adjusted by friendly and amicable negociations. In cases of this sort, our government ought to act with friendly and generous liberality towards our weaker neighbor; and where such expeditions originate within our limits, (as they usually do,) the most ample satisfaction should be made for the wrongs done, and punishment inflicted upon the wrong-doers. A like course on the part of Mexico would remove all grounds of complaint. Completely guarded and protected on all sides against invasion, by a wise and conciliatory course towards other powers, we may easily preserve perpetual peace with them. *One example* in thus showing the practicability of preserving a constant and uniform state of peace with all nations, will furnish a most valuable and glorious *example* to the nations of Europe, Asia and Africa; and we may entertain a confident hope that such an *example*, coupled with the powerful influence of the principles of Christianity and the blessing of God, will in due time put an end to all wars; and that the happy time, as predicted by Isaiah, will be realized, when men "shall beat their swords into ploughshares, and their spears into pruning hooks." When "nation shall not lift up sword against nation, neither learn war anymore."

But a war with other nations is not the only danger we have to fear. The sketch I have given of the history of the three great eastern empires, and of the rise, progress and final extinction of the Roman republic, shows that internal commotions may lead to *civil wars*, and *these* are sometimes even more destructive to republics than foreign wars, because of the immense destruction of life and property which usually attends such civil commotions; and because, if frequently repeated, they will inevitably lead to the substitution of a despotism in place of a republic.

We ought to guard with the utmost vigilance against whatever shall tend to bring about civil wars as well as wars against foreign nations.

From the fact that nations having very widely extended dominions have been invariably subject to internal commotions and almost constant wars with the surrounding nations, and have been ultimately entirely conquered and completely overthrown, some have apprehended that such will be the fate also of the American republic, when its widely extended territories shall be filled with as dense a population as the empire of the Babilonians, Medes and

Persians, Greeks and Macedonians, and the Roman empire in the time of the Caesars. From the history of the past there are some apparent grounds for such apprehensions. But there are circumstances of great importance applicable to the United States which will justify the conclusion, that the great extent of our territory and the dense population with which the American republic will be filled, at a not very distant period, will not be productive of the evils which have befallen the widely extended empires of the east.

1. Our great country will not be under the control of a concentrated government, which would inevitably lead to the abuses and corruptions which never fail to spring up in republics as well as in monarchical countries of very great extent. The constitution happily provides for the division of its parts into separate and independent States, for the government and regulation of all matters of a local nature and of domestic interest, and yet connected and bound together by a national constitution which vests all necessary powers for the general protection and harmonious government of all the parts.

2. The population of the United States will not have been acquired by the conquest and annexation of foreign dominions. The annexation of Florida, Louisiana, Texas, New Mexico and California, introduced into our confederation a small foreign population, but this was so very inconsiderable in proportion to the territories acquired, as to be scarcely perceptible; and this population will soon become so completely amalgamated, as to produce no injurious effect, especially as the young generation will soon become completely americanized, in consequence of these vast territories being rapidly filled up with emigrants from the other States of the Union, leaving only a very small sprinkling of the foreign stock, and these completely amalgamated with native citizens.

Happily these circumstances render the condition of the United States very different from that of the empires whose downfall has been noticed, and ought to relieve us from all apprehensions that our great republic is destined to meet so lamentable a fate as this. But if we should follow the example of the Roman republic, and suffer our ambition to carry us beyond the natural boundaries by which we are so happily hemed around, and should continue to annex to our great confederacy one territory after another, we shall inevitably be exposed to the danger which proved so fatal to the Roman republic. Encroachments may be so gradual as to create no alarm; but each one may form a pretext for another, and thus, step by step, we shall almost without perceiving it be hurried on the gulf of destruction. There is no safe course left for us but to stop were we now are. If we add another slice of Mexico—another will be necessary to secure *that*—and we shall soon begin to think that we need the Isthmus of Darien, as a *convenient boundary* to the south, and *pass way* to the Pacific. If we annex *one island*, another will be thought *necessary* for its protection, and

to insure all its commercial advantages. We must have Governors and Generals to rule and protect these distant possessions. We must have controversies as to how they shall be governed, and how, when and upon what terms they shall be admitted as States? Dissentions and civil wars will spring up, and a dissolution of the Union will follow, which will put an end to all hopes of the philanthropist that wars are to come to an end, even in this blessed land of peace, as it may be made if we act wisely.

During the convulsions which will inevitably arise out of a dissolution of the Union, some successful General, an other Julius Caesar, will become the *Dictator* of the country, and then we may in the history of Rome read the destinies of our country. Oh God save us from such a calamity, and teach us by a course of virtue and wisdom to furnish an example to all other nations, by what means wars among mankind may entirely cease!

Beside the dreadful calamities which will, sooner or later, be brought upon our country by encroachments upon other powers, whether by the *sword* or by *purchase*, we shall, in the meantime, be involved in wars with foreign powers jealous of our encroachments, and thus we shall signally fail in proving by our example, that there is no necessity for carrying on war.

Our path is a plain one, let us set the glorious example to the world, that neither *war* nor *annexation* of foreign territory is *necessary* to our happiness. Let us never show a disposition to encroach upon the possessions of our neighbours, either by the *sword* or by *purchase*, but by moderation, prudence and forbearance prove that wars are *unnecessary*, and thus effectually aid in preserving the peace of the world.

It cannot be expected that wars are to cease at once all over the world. This great and beneficent work is to be accomplished only by a slow and gradual process, and we can hope to promote its accomplishment only by our example, by which we shall show to the world the practicability and inestimable advantages of a permanent cessation of war.

The American republic has a glorious destiny to fulfill in putting an end to the scourge of war in the western hemisphere. Her *example* and the great and unspeakable benefits flowing from a perpetual peace, will be most immediately felt by the European nations. These nations are more and more experiencing the great evils resulting from the burthensome taxation which they are compelled to impose upon their subjects to meet the vast expenditures occasioned by their large standing armies and extensive fleets and other costly preparations in time of peace to prepare for war. One nation, by increasing its standing military force in time of peace, produces a *necessity* for the neighboring nations to make a correspondent increase of military preparations, in order that they may be prepared to meet the encroachments of the nation, thus increasing its peace establishment. Every step taken by one na-

tion of Europe to increase its military establishment, produces a *necessity* for a correspondent increase on the part of all the other European nations. Hence the burdens of taxation are constantly increasing. But this is not all; when wars occur, the increased expense for carrying them on, must be met by borrowing large sums of money, and new taxes must be levied to pay the interest on such loans. From these causes, the burdens of taxation are constantly increasing. This must inevitably lead in time to such a pressure of taxation as to leave *less* than a bare subsistence out of their earnings to the agriculturists and manufacturers of the country. When this state of things arrives, *starvation* or *revolution* will be inevitable. The European powers will be compelled to choose between these alternatives, or they must change the system of policy by which they have been hitherto governed. They must adopt our policy—follow the *example* we have set them by putting an end to all wars in Europe, as we shall have done in America, the effect of which will be to dispense with the necessity of keeping up large standing armies which will relieve them from the immense pressure of taxation under which they now labor. Nor will it be necessary to retain any considerable military force to prevent their subjects from attempting by revolutionary movements to reform the abuses of taxation; because these powers will find it their interest, and will now, by the cessation of wars, be enabled voluntarily to correct the erroneous abuses of taxation, and as speedily as possible relieve their subjects from the excessive burdens under which they have been laboring for many years. When their oppressed subjects witness an honest, well directed and energetic effort, making by a rigid system of economy to remove all abuses, and to relieve the people as fast as possible from taxation, their good will will be secured, and the government freed from all danger of civil commotions.

A rigid system of economy in the military and naval establishments, which will flow from the preservation of peace, will necessarily lead to economy in all other departments of the government. A question here presents itself, what are the best means of bringing about an agreement between the European powers to discontinue the use of large standing armies?

The first step towards the accomplishment of this very desirable object would be a negociation to bring about and firmly establish the principle that in relation to the powers of Europe there shall be no change of boundary by the annexation of part or all of the territories of any one of these powers to any other one or more of them. Such an agreement, if firmly established and guaranteed by the leading powers, would secure peace among them all, for there would be no sufficient motive for going to war on minor points of difference, because these could be easily adjusted by friendly negotiation or by reference to other powers.

Let the principle be once established and guaranteed, that the boundaries of the different nations of Europe are to remain *un-*

changed, there would no longer be a *necessity* for keeping up large standing armies in time of peace, and, consequently, these would gradually crumble to pieces and be discontinued. This process would probably be hastened by arrangements among the neighboring powers.

Russia is at this time, the most formidable power in Europe, in relation to land operations. Her great aim is to extend her frontiers to the Dardanelles; to obtain by conquest the sovereignty of the Black Sea, and of Constantinople. Unless restrained by the other powers of Europe, not many years will elapse before she will become complete mistress of European Turkey, and of both shores of the Dardanelles. The vast population of Russia, and the immense commerce which she will speedily realise by her command of the Black Sea, the Sea of Asoph and the Caspian, and the great rivers falling into these seas and the north-eastern ocean, will soon render her the most formidable naval power on earth, with the exception of Great Britain. The commercial marine of the United States will doubtless far exceed that of Russia in her palmiest days, even if she should be allowed to become the mistress of the Black and Caspian Seas, but our circumstances will supercede the necessity of building up a large public navy. If Russia should be permitted to aggrandize herself on the side of Turkey, and quietly to build up an immense commerce and a great naval power, Western and Southern Europe will literally be at her mercy, whenever a favorable occasion shall arise for extending her conquests. To attempt to check the progress of the Czar's conquests, after he shall have made a conquest of the dominions of Turkey in Europe, and completely consolidated his power by the acquisition of Constantinople, would be perfectly in vain. The Dardanelles would be so completely guarded as to prevent any foreign power from sending a single vessel of war into the Black Sea. On the East the Black Sea and the Caucasian mountains would serve as a barrier against all enemies. On the North, his dominions extend to the Frozen ozean. On the North-west he is protected by the Baltic Sea. In a word, his dominions are so guarded to the East, the North and West, that he can bring nearly his whole military force to bear down upon the southern and south-western powers of Europe.

These powers aware of their danger, are now engaged earnestly in a great effort to check the power of Russia, while they have the means of doing so. By means of their superior naval power and consequent command of the Baltic and Black Seas, they can bring an immense force to act upon the most assailable points of the Russian possessions, and will without doubt be able to check, for the present, her ambitious designs of extending her dominions to the utmost limits of Europe. But the only way in which they can permanently check the grasping power of Russia, and thus save themselves from her insatiable ambition, will be by adopting and

enforcing the principle that there shall be no change made in the boundaries of any of the European powers; and by compelling Russia to stipulate by treaty to conform to that wholesome principle.

By acting efficiently at this time, Europe may not only secure herself effectually against the rapidly growing power of Russia, but establish the great principle of preserving *unchanged* the boundaries which shall be decided upon at the general peace, and thus contribute in a very essential manner to the permanent preservation of peace among European powers, and the cessation of wars among men. The advantages resulting from such an arrangement will by experience become more and more obvious, and will more and more strengthen the disposition among men to put an end to all wars. Public sentiment will in time bring all nations to the conviction that wars are *unnecessary*, and such conviction will ultimately bring about universal peace.

What a blessed state of things will exist when wars among men shall have entirely ceased. If only one-tenth of the sums expended in warlike operations and keeping up navies and standing armies in time of peace, were appropriated to the purposes of education and internal improvements of a general and useful character, it would make our world almost a perfect garden of Eden. God grant that such a state of improvement may speedily arise, and that by the universal introduction of pure Christianity sin may be banished from the world, and that peace and good will may universally prevail among all mankind.

December 20th, 1854.

ARTICLE III.

Valley of the Ohio.

BY MANN BUTLER, ESQ.

Continued from page 256, vol. XIII. No. 4.

The progress of public news in the western country in 1783; Intrigues of France and Spain to limit the U. S. on the west; Proposed surrender to Spain of the navigation of the Mississippi below the southern boundary of the U. S.; Firmness of John Jay; Establishment of the District of Kentucky in 1783; First jail at Crow's station of hewed or sawed logs and log Court House; Rise of Danville; its neglect, its revival; Reception of an immigrant to the West.

The preliminary articles of peace between the United States and Great Britain, which had been signed at Paris on the 30th of November, 1782, were not known in Kentucky, until the spring of the next year. A singular illustration of the imperfect intercourse at that time between the western section and the other parts of the country. When the History of the Commonwealth of Kentucky was written in 1833, the ordinary route of the mail from Washington City and Philadelphia to Louisville, in Kentucky, was only about a week or eight days to either place. At the present time,

in 1854, it is about 2½ days to Louisville, and from 3 to 4 days to St. Louis.

This is not the place to expatiate upon the honorable termination of the labors and sacrifices of the sages and patriots of the American revolution; they are embalmed in a more enduring manner than by any historical record—the hearts and memories of an emancipated people. The incidental operation which peace produced on our domestic hostilities, most strictly appertains to the affairs of the valley. The Indians alarmed at the approaching loss of their powerful allies, who had fed, and clothed, and armed them against their most hateful enemies, that had taken possession of their hunting grounds, suspended their incursions into Ky.

It may be interesting to the reader, in connection with the negociation of peace, to observe the attempts which were so artfully and perseveringly taken with all the skill of the old diplomacy of Europe, to sever the valley of the Ohio from the rest of the confederacy. The first step taken in this insidious intrigue was by Count Lucern, at Philadelphia, in conformity with instructions from Count De Vergennes, the French minister of State. On the arrival of the former gentleman in America, he lost no time in pressing on Congress* certain instructions for their ministers at Paris, pursuant to the following ideas: 1. "That the United States extend to the westward no further than settlements were permitted by the British proclamation of 1763," that is forbidding settlements west of the Alleghany mountains; 2. That the United States do not consider themselves as having any right to navigate the Mississippi, no territory belonging to them being situated thereon." 3. "That the settlements east of the Mississippi" [embracing the whole valley of the Ohio with its southern neighbors] "which were prohibited as above, are the possessions of the Crown of Great Britain, and proper objects against which the arms of Spain may be employed for the purpose of making a permanent conquest for the Spanish Crown."

In consequence of events adverse to the American arms, Congress, on the motion of the Delegates from Virginia, authorized by a resolution of the State Legislature, in 1781, and assented to by all the Southern States, with the exception of North Carolina,* instructed Mr. Jay, then minister to Madrid, "no longer to insist

* Pilkin, II, 92.

† Jay's Life, I, 126.

on the free navigation of the Mississippi *below* the southern boundary of the United States. Still this dishonorable and destructive concession was fruitless; and Spain would neither acknowledge American independence, nor form any treaty with the United States; though she would have granted any money required by the exigencies of the United States, provided Mr. Jay would have concurred in her favorite scheme of excluding foreigners from entering the Gulf of Mexico by the rivers of the North.*

The independent firmness of John Jay, in resisting these arrogant pretensions, under the mortifying pressure of bills of exchange drawn upon him by Congress for half a million of dollars, in expectation of Spanish assistance, must immortalize him among American patriots; they form a model for their guidance in similar emergencies. To it, we owe the vantage ground in regard to the precious right of navigating the Mississippi, which has now matured into full and indisputed sovereignty from its head-waters to the Gulf of Mexico.

But notwithstanding the failure of this favorite Spanish scheme at Madrid, it was pressed again at Paris by the Spanish minister, Count Aranda, supported by Count De Vergennes and his secretary, M. Rayneval, upon the same minister, with, however, the same honorable result. This second failure, when supported by the whole influence of the French cabinet, is still more honorable to the character of Mr. Jay, because the French minister to the United States had the adroitness to persuade Congress in a moment either of despondency or of credulous confidence to untrust its ministers at Paris, "to undertake nothing in the negociations for peace or truce without their knowledge and concurrence," meaning the concurrence of the ministers of the king of France, "*and ultimately to govern yourselves by their advice and opinion.*"† A step of degrading compliance and subserviency which, whenever this country shall again be prepared to take, it had better surrender in form an independence which she would no longer retain in reality.

Yet the American plenipotentiaries extricated themselves from the toils prepared for them by a foreign court armed with the perverted authority of their own government; and by a firm and sagacious concert brought their country by solemn treaty with exalted

* Pilkin, II, 97.
† Idem, II, 109.

honor out of war into peace, and out of colonial subjection into national independence.

Let us now attend to some of the proposals which would have affected the future condition of the valley of the Ohio. The Secretary to the French minister of State, after a long argument to show that the rights of the United States were derived through Great Britain, and that she had acknowledged the Indians as an independent power belonging to neither party, proposed to run the boundary on the west to *Fort Thoulouse*,* and then by various points, which the author has been unable to identify in our more recent topography, to intersect the "*Cumberland River*, whose course is to be followed until it falls into the Ohio. The savages to the west of the line described," that is west or north-west of the Cumberland river, should be free, and under the *protection of Spain;* "the lands situated to the northward of the Ohio "*must be regulated by the court of London.*"† Fortunately these joint intrigues of Spain and France (too much like the two serpents in ancient mythology sent to strangle the infant Hercules in his cradle only the jealous Juno is known,) were admirably counteracted by John Jay on his own *individual* responsibility, against his own instructions.

The definite treaty of peace had been signed at Paris, in September, 1783; but the ratification of the parties was not exchanged until May, 1784; this it was fondly hoped, would have immediately led to the surrender of the British posts on the lakes; and consequently to a control over the conduct of the Indians, which has ever followed these strongholds in their country. They have ever proved the keys to their passions of fear or attachment, whether in French, British or American hands. Mutual complaints of infractions of the treaty, and unfortunately as well grounded against Virginia for suspending the collection of British debts in her courts; as against Great Britain for retaining forts within the acknowledged boundary of the United States, protracted the execution of the treaty. In the meantime, the Indians perceiving the frontier fortifications which strike them as the most palpable marks of ascendency, still in the hands of their old friends, necessarily relied upon protection from them against the Americans. This was too readily afforded by the agents and subjects of the British govern-

* At the head of the Tombickbee, or Tombigby, Darby's Gazetteer.

† State Papers, II, 169.

ment; particularly those who were interested in the monopoly of the fur trade.

Truth likewise demands the acknowledgment that many individuals in the west displayed a revengeful hostility against the Indians, not at all short of their own ferocity to the whites. In one instance, a friendly Indian was seduced into the woods by a white man and secretly *murdered;** yet no punishment of the law could be inflicted upon the offender, owing to the popular resentment against old enemies, and the unjustifiable sympathy with a shedder of human blood, though Indian.

The effect of this winking of the laws at the offenses of the white man against his red brother is said to have been instantaneous; "the amicable parties of Indians ceased, confidence was lost, friendly intercourse abated;" and retaliation became the only redress. This soon lighted up against hostilities on the frontiers; in estimating these conflicts, it must not be forgotten that the Indians were predisposed against the white man by nearly two centuries' encroachment upon everything dear to native hunters.

Previous, however, to entering on another portion of the sanguinary annals of the country, it will be interesting to notice the extension of our pacific, and the improvement of our social condition.

Hitherto that portion of Kentucky lying north of Licking river, had remained unsettled, as it was deemed dangerous from its contiguity to the northern Indians. Indeed, surveys had been suspended in this part of the country by order of the principal surveyor; they were afterwards resumed, and again suspended, by the appearance of Indian *sign*.

In March, 1783, an improvement of the judiciary in this distant part of Virginia was directed by the Legislature, uniting the *three counties* into one district, to be called the *District of Kentucky*, with a court of common law and chancery jurisdiction co-extensive with its limits; and also possessed of criminal jurisdiction. This court was opened at Harrodsburg on the 3d of the month, by John Floyd and Samuel M'Dowell† as judges; the third judge, George Muter, did not attend until 1785. John May was appointed the first clerk, and Walker Daniel was likewise appointed by the Governor of Virginia Attorney General for the District of Kentucky.

* Marshall, I, 167.

† The grandfather of the celebrated surgeon of that name in St. Louis, Mo.

This constitutes the third alteration of Kentucky. 1, the *county* of Kentucky; 2, the three counties sinking for a time the name of Kentucky; and now, 3, reviving the name of Kentucky in the District of that name, to go out, we trust, no more forever. This commenced the higher judicial organization; at this time *no* house at Harrodsburg could conveniently accomodate the court; and it adjourned to a meeting house near the Dutch station, six miles from its place of meeting. The Attorney General and Clerk were directed to fix on some *safe* place near Crow's station, close to the present town of Danville, for holding the court; they were likewise authorized to contract for building a jail of *hewed* or *sawed logs*, at least nine inches thick. This arrangement so suitable to the poverty of the mechanic arts at this time in Kentucky, gave rise to the town of Danville. For the court engaged that in case the said Daniel and May at their own expense caused to be built a *log* house large enough for a court room in one end, and two jury rooms in the other on the same floor, together with a jail, "they would adjourn to the place so to be fixed on, and promised a conditional re-imbursement, in case they removed to any other place, either out of the funds allowed for the support of the court, if sufficient; if not, by using their influence with the legislature to have them paid." This had the desired effect, and *Danville*, in Mercer County, Kentucky, arose out of this speculation.*

Yet this ancient town, if anything artificial in the West is entitled to that appellation, after having been the victim of various strange juggles of political intrigue, ceased even to be a county-seat, has again become the seat of justice for the new county of Boyle. May the sound and excellent college so appropriately denominated *Centre College*, and the beneficent *Asylum for the Deaf and Dumb* long continue to compensate the inhabitants of this delicious section of Kentucky, the primitive metropolis of the State, for the wayward tricks of which they were so long made the victims.

Society now rapidly assumed the character of older and riper communities. A fertile soil, liberty and peace soon spread their benign influences over the land. The fields smiled with the heavy crops; cattle and hogs throne in the rich range of the woods to an astonishing degree. Emigrants diffused considerable money, and

* Marshall, I, 159.

labor was well rewarded. Mechanics, divines and schoolmasters soon filled up the picture. Several crops of wheat were raised on the south or southwestern side of the Kentucky river; some distilleries for the distillation of spirits from Indian corn were built.

This year [1783,] was likewise distinguished by the opening of western trade with the fair and opulent city of Philadelphia.

It was done by *Daniel Broadhead*, who brought merchandize from that place in wagons to Pittsburg; and thence in flat bottomed boats to Louisville, where it was exposed for sale, and thus established, it is believed, the first store in the State for the sale of foreign merchandize.

In Philadelphia were formed several companies of land speculators, who converted their hordes of depreciated paper money of Virginia into land warrants of that State, and added a new impulse to a tide of warrant holders already at a flood.

A commercial association had likewise been formed at the above city; the active partner of which was *James Wilkinson*, afterwards so prominent in western affairs. This gentleman's movements, though in private life were so influential and impressive as to constitute quite an era in the history of the West. He will again present himself on the canvass in prominent attitudes and strong lights; he arrived at Lexington, Kentucky, in February, 1784, where he proceeded to open a store of merchandize adapted to the wants of the country.

During this year, *Simon Kenton*, of distinguished fame in these heroic times of the West, re-possessed himself of improvements made by him in 1775, after an absense of nine years * The site of these improvements was near the head of Lawrence's creek. Here, he with others "erected a blockhouse, with a view of permanent possession, being the first established in that part of the country. They added other cabins in the course of the summer, and in the autumn of 1784 the station became inhabited by families."†

Thus was the northern portal of Kentucky fortified to protect the entrance of immigrants who might land at Limestone, now Maysville. Here also Kenton with Edward and John Weller erected another blockhouse, the same year. At this time there were only three stations between Limestone and the Blue Licks, the

* Marshall, I, 188.

† Idem.

latter made by the Messrs. Tanners, the previous year, and the first outside of Bryant's station in this direction. Thus the route soon became a favorite avenue for immigrants into the country, offering them security and much comfort for so new a frontier just snatched from the wilderness, even in comparison with what had been the case but two years before. "Now they were permitted to lodge on the cabin floor, instead of the damp, unbroken soil; now they were sheltered by strong walls and a tight roof, in the place of clouds or the more distant sky—so lately their only caravansary. While the owner of the newly erected castle, not free from the apprehension of danger, felt himself and his family more secure, on account of his travelling guests, bid them a hearty welcome—asked them the news—showed them where the best cane or clover grew for their horses, and when they were belled and hoppled; bid their owners come in, and rest themselves."*

Such is the graphic picture of an immigrant's reception on his first entrance into a frontier settlement. It is drawn by the hand of a master who had himself witnessed all its lights and details.

ARTICLE IV.

Mineral Wealth of the United States.†

We notice Professor Wilson's interesting report on the mining and metallurgic position and prospects of the United States. Their peculiar geological features, as seen in the enormous development of the older formations, early indicated the probable possession of mineral wealth, and every State that, from time to time, became sufficiently important to be added to the federal Union, brought with it a dower, not more valuable from the surpassing fertility of its surface acres, than from the hidden riches which lie beneath them. The distribution of the metallic minerals in the different States is, however, somewhat irregular, the rarer metals and gold being found but in few localities; tin only to a limited extent in one place; lead and copper are generally seen associoted together, occurring to a greater or less extent in most of the States; while iron is met with everywhere, in some places forming deposits of enormous magnitude, and in others compensating for its diminished

* Idem, I, 189.

† From the London Journal.

quantity by the richness of its ores. The iron ores found in the States comprise every variety known in Europe, save, perhaps, that of our country known as the "blackband." Those principally used for smelting are the magnetic oxides, the hematites, and the clay carbonates of the coal measures; besides these, the "spathic," or "sparry carbonate," and the "oligist," or specular iron ore, are used, but at present only to a limited extent. The magnetic oxides and hematites are dispersed pretty generally throughout the whole extent of the Union, and the clay carbonates are associated with the coal measures lying west of the Appalachian chain—in general they are not so rich as those in our own country; but, when mixed with the hydrated hematites, these lean ores are advantageously worked. In 1830, anthracite coal was successfully used in smelting ores; and when, some years later, it was shown that the hot-blast could be as advantageously applied to anthracite as to other furnaces, Pennsylvania became at once the great centre of the industry, and speedily assumed the control of the home market.

The manufacture of iron has hitherto distributed itself on the line of eight great rivers—the Housatonic, Hudson, Delaware and Lehigh, Schuylkill, Susquehanna, Potomac, Ohio, Cumberland, and Tennessee. The make of the first division cannot be estimated at more than 10,000 tons per annum, which are consumed, chiefly in the immediate districts, in the manufacture of cast-iron railway-wheels, and malleable iron castings.—2d. The Hudson River traverses the State of New York, and on its line are six large anthracite furnaces; on Lake Champlain, three more; and the rich ores of the deposit deriving its name from that lake are said to work up well by themselves in the anthracite furnaces, without the admixture of any leaner ores, with a less consumption of fuel, from one-third to one-fifth of coal being sufficient to produce one of metal. These advantages all tend to reduce the cost of anthracite iron-making in the Hudson district, which Professor Wilson had every reason to believe could be made on tide water at an average of $18 per ton. The quantity made is rapidly increasing, and it is stated that the returns for the current year, 1853-4, will not be less than 80,000 tons.—3d. The Delaware is the next great river, south of the Hudson; in this district are the most extensive and successful iron-works in the United States; and iron can be made on the Lehigh at as cheap a rate as at any other spot in the Atlantic States. In the establishments visited, economy of production was found to be adhered to, the air being heated by the waste gases of the furnace; and in most cases, the steam power, whether for driving the blast or for other purposes, was generated in boilers set in the upper part of the furnace, and arranged so that the heated gases played around them. The aggregate produce of the district may be taken at 110,000 to 120,000 tons per year, which will probably be increased, as new furnaces of the largest class are in progress of erection. Owing to the advantageous position of the furnaces

on the Lehigh, and the scale upon which they are worked, it would appear that the actual cost of making iron there would not exceed from $14 to $16 per ton.—4th. Tne Schuylkill takes its rise in the south-western extremity of the first great coal basin, and, pursuing an eastern course, runs into the Delaware a short distance below the city of Philadelphia. An estimate of the expense of making iron, drawn up in 1850, makes the then average price per ton $17,50, since which period, prices, both for materials as well as labor, have risen fully 25 per cent. Upon this river there are in operation 18 blast furnaces, using anthracite coal; but these furnaces are of smaller capacity than those on the Lehigh, and their total production may be taken at 100,000 tons per annum.—5th. The Susquehanna is another of the great parallel rivers; in one portion of its course it skirts for many miles the south-western extremities of the first and second coal fields, and the western branch, into which it divides, traverses the centre of the third, the great "Wyoming" basin. Along its bank large deposits of iron ores are met with; iron can be made in the district at a price averaging from $15 to $18 per ton; and in some of the most favorable cases, where the furnaces are in immediate proximity to the ore and fuel, it can probably be made at $2 to $3 per ton less. The iron industry of the Susquehanna is in a prosperous state; the production is already very considerable—not less than 120,000 tons will probably be made in the present year, the greater part of which finds a ready market west of the Alleghanies. Pennsylvania furnishes, in round numbers, one half of the whole production of iron in the Union. The entire number of furnaces in the State, in 1850–1, was 304, and the actual make 198,813 tons.—6th. The Potomac is the next of the great rivers, taking its course some 60 to 100 miles south of the Susquehanna, and running into Chesapeake Bay about midway from the ocean; and in the district is included the production of Virginia and Maryland. The district is abundantly supplied with ores, chiefly hematites, of good quality. Charcoal is the fuel chiefly used, although the increasing means of communication with the Cumberland coal basin, and with the anthracite region of Pennsylvania, must afford great advantages in the way of fuel to the furnaces placed within reach of the lines of transport. The present cost of coal-iron in this district may be taken at an average of $20 per ton; while charcoal-iron cannot be made at less than $25 to $30 per ton. The gross production of iron of this region may be estimated at 125,000 tons, of which Maryland returns about 100,000, and Virginia about 25,000 tons.—7th. Professor Wilson has classed together the two divisions, the Ohio and the Cumberland and Tennessee, not having been able to procure any satisfactory information as to the details and present condition of the iron industry of either. As the demands of the western markets are being supplied by western production, from the best estimates he could obtain the production could not be less than 150,-

000 tons for the past year. The iron-making facilities of the Western States are yet only partially displayed, but the enormous area occupied by the great Appalachian coal-field secures the possession of an illimitable supply of fuel; while the well-defined existence of beds of clay and iron ore, associated with the coal measures, places the raw material under conditions most advantageous to tha manufacturer. These, however, have hardly as yet been rendered fully available to iron-making. Charcoal as fuel, and the hematite ores found on the outskirts of the coal-field, supply the principal portion of iron now produced; and the present cost of making cannot be less than $20 per ton.

If these estimates are correct, the entire production of the States for the year 1853–4 may be taken as 805,000 tons; while the gross amount of iron produced in the several States of the Union for the preceding year, 1852–3, is given at 540,755 tons; the number of hands employed, 20,298; and the market value of the produce, $12,489,077. Taking the present production of pig-iron at 800,000 tons, about one third of it is consumed for castings, and the rest is convertible into wrought-iron, at a loss in waste, &c., of about one third, which, for practical purposes, reduces the total or available production about 130,000 tons, and leaves, in round numbers, 600,000 tons, to meet a consumption of not less than 1,200,000 tons; and the deficiency must be supplied by the produce of other countries. The Treasury Returns state the number of establishments for the conversion of pig into wrought-iron at 422, giving employment to upwards of 13,000 workmen; and the entire amount manufactured in the States may be taken at 500,000 tons per annum.

A process, patented by James Renton in 1851, for making wrought iron direct from the ore, is being carried out on a commercial scale at Cincinnati, in Ohio, and at Newark, in New Jersey. Professor Wilson visited the latter establishment, and the working returns that were furnished to him were certainly very satisfactory, although the operation, which has been several times attempted, has never been successful in this country. The report explains the process in detail, and points out the difficulties to be overcome.

He also mentions another point of interest in connection with this industry—the method of utilizing the slags of iron furnaces, illustrated by Dr. W. William Smith, of Philadelphia, in the New York Exhibition, in Class XXVII., where a collection of bottles, slabs, bricks, and other articles, run direct from the reducing furnace, were exhibited. The finish and appearance of the various articles would justify the expectation that the process, if applicable to the slags of coal furnaces generally, would be of great industrial importance, the price being about four cents per cubic foot for slabs. We notice this productive use of the refuse of furnaces as well worthy of attention in the vast iron-works of these islands.—*Mining Magazine.*

ARTICLE V.

Pacific Railroad*

SPEECH OF HON. HENRY S. GEYER, OF MISSOURI, IN SENATE, FEBRUARY 19TH, 1855.

The Senate, in Committee of the Whole, having under consideration the bill for the construction of a Railroad from the valley of the Mississippi to the Pacific ocean, as amended by the adoption of the substitute of Mr. Gwin.

Mr. GEYER—Mr. President, when this bill was before the Senate a few days ago, I expressed a hope that I should be able to vote for it, although I preferred the original bill reported by the committee at the last session. I have, since, had an opportunity (which I had not before,) to examine into the provisions of this bill, as amended, and the result is, that I cannot reconcile it to my sense of duty to vote for it. I should be content to give my vote in silence, but that I am a member of the select committee by which both the original and the substitute were reported; and the subject is one in which my constituents take a deep interest; and, therefore, I feel called upon to submit the reasons which govern my vote.

We are all anxious to form, as early as possible, an easy and rapid communication between the Atlantic States and our Pacific possessions, so as to bring them readily within our supporting distance, in case of any difficulties with a foreign power, and for the purpose also, of carrying on the commerce of our own country, on our own soil, and by our own people. But, sir, we must look at this proposition as practical men, look at it with reference to the means and the hope of accomplishment, and with reference to its effect, also, on other portions of the country.

In order to make a few remarks which I shall submit, in explanation of my objections to this bill, perfectly understood, I ask the attention of the Senate, for a moment, to some statistical fact, which I deem worthy of consideration. Sir, there are now in operation in the world more than forty-thousand miles of railway, requiring a large supply of iron annually for the purpose of repair-

* The Thirty-third Congress having expired without maturing any plan in aid of the Pacific Railroad, it cannot be otherwise than interesting to the people of the Western States to take a view of the last phase which the subject assumed in Conrgess after the labors of two sessions. For ourselves, we are at a loss for terms to express our sense of disapprobation of all the schemes which have been projected with reference to assistance from the General Government in constructing the work. To say the least of them, they have been marked by neither the broad discriminating views of the statesman nor the well judging forecast of the practical economist.

We commend the course pursued by Senator Geyer in opposing the last of these absurd plans, and trust his sound and able argument will produce a good effect upon the public mind.—*Sr. Ed.*

and involving a large expenditure of money. Of the railroads in operation, there are in the United States twenty-one thousand three hundred and ten miles, constructed at the cost of $621,316,000. We have now in course of construction sixteen thousand nine hundred and seventy-five miles. If the construction of these roads shall cost the same amount and no more per mile, on the average, than was paid for the construction of those now in use, there will be added, in the course of a few years, to the expenditure on railroads nearly 500,000,000. Of the cost of the roads already constructed, there are, perhaps, $300,000,000 of debt outstanding; and now it is proposed, under these circumstances, to undertake three railroads between the Mississippi and the Pacific ocean, adding six thousand miles more, at a cost of from $300,000,000 to $400,000,000 for the roads alone, exclusive of depots, stations, rolling stock, and equipments.

These facts, about which there can be no dispute, should, I think, induce us to pause before we commit ourselves to the measure before the Senate. We consume now, annually, in the United States, about three hundred and fifty thousand tons of railroad iron for the purposes of repair, for additional tracks on roads in use, and for the construction of new roads. We have been enabled to obtain from Europe two hundred and eighty thousand tons; and about one hundred thousand tons are manufactured in the United States, making three hundred and eighty thousand per year. There will be, without the roads contemplated by this bill, a large addition annually to the consumption of iron by the construction of new roads and repairs of the old ones which will bring it up, perhaps, to four hundred and fifty thousand tons. Now, I would inquire where is that to come from? How is the demand to be supplied, if we increase it as proposed? The Senator from Pennsylvania (Mr. Broadhead,) reminds me that a great deal of the old iron is rewrought. That may be so; but certainly, if we add to the present consumption of this country the amount required for the roads now contemplated by this bill, the demand for iron will be greatly beyond the supply, producing an injurious effect upon all the local enterprises in the United States. According to the law of trade, the price of iron will advance when the demand shall be made to exceed the supply. The tendency, therefore, of this bill, is to affect injuriously the operations on the roads on this side of the Western boundary of the organized States. It will have that effect, if the roads contemplated by this bill are undertaken.

Mr. President, there has been some difference of opinion among Senators whether this bill contemplates three railroads or one. It is supposed by some that it will be submitted to the discretion of the Secretary of War, the Secretary of the Interior, and the Postmaster General, to contract for one or more. Others think that they will be obliged to contract for the three roads, if bids are offered within the terms proposed. The bill is not very clear on

that subject, but my impression is that they are to go on and receive proposals until the three roads are contracted for. The first section provides for them; the second directs advertisements to be published inviting proposals for the construction of each or either of them; and, by the third section, when proposals are received, the Secretaries of War and the Interior, and the Postmaster General, are, under the direction of the President, "authorized AND DIRECTED to contract with the party or parties whose proposals, as aforesaid, for said lines respectively, for the full and complete construction and keeping up of either line or each of said lines of road and telegraph."

This clause, standing alone, would seem to vest in the Secretaries and Postmaster General the authority to select one road, and reject the proposals for the others, if made; but the eleventh section provides, that in the event that any one of these roads shall not be proposed for, new advertisements shall be issued, and continue to be issued annually, until contracts for all the roads are made. The bill, therefore, contemplates the construction of three roads, if proposals for them can be obtained upon the terms prescribed.

But while it in terms authorizes the Secretary and Postmaster General to reject such proposals for any one of the roads, it makes no provision for receiving future proposals or contracting for the construction of such road. The eleventh section applies only to the case where proposals are not received, under the first advertisement, within the time prescribed, and not to cases of such proposals received and rejected. Suppose proposals should be received for the Northern and Southern routes, or the whole three, and the Secretaries and Postmaster General accept the proposals, and contract for the Southern road, and reject the others, as they may, by the terms of the third section, they would not be required or authorized to receive new proposals, and contract for any road for which proposals, within the terms of the act, had been received and rejected. The bill, therefore, rests in the three heads of departments named a very large and dangerous power, which I am undisposed to confer. The bill is, however, evidently framed with a view to the construction of three roads; and its friends maintain that there is no discretion vested in the departments, and they say that the three roads must be contracted for, if proposals within the terms prescribed are at any time made, and in that view, if that is the interpretation of the bill, it is, in my judgement, extravagant and unpracticable.

After the proposals are received and contracts entered into, there are certain preliminaries to the commencement of the work, which I propose to examine. In the first place the contractors are to fix the termini of all the roads except the Central, which is to have its western terminus at the Bay of San Francisco. It will be seen in the sequel, that this is a very large discretion; and it is one

which, if the proposed contracts are made and executed, will operate very beneficially to your State, Mr. President, (Mr. Weller in the chair,) and very injuriously to that which I have the honor, in part, to represent.

The termini are to be fixed and the general route of the roads located within two years from the date of the contracts respectively; and thereupon surveys of the lands for forty miles on each side of the roads are to be made under the direction of the President. Now, I would ask how the contractors will obtain the information necessary to a judicious location of the roads in two years, which Congress, with all the resources of the Government at command, have not been able to obtain? This is now the fourth session that I have had the honor of a seat in this Chamber, and the subject has been before the Senate at every session, I believe. Two years ago, Congress made provisions for survey of explorations of several routes. We have not yet received all the reports, and it is only within a few days that we have had access to any; and now we call upon the contractors to exercise the power and perform the duty which belongs to us. We assume that they will have information that we cannot obtain. We commit to them a discretionary power over a subject of public interest, acknowledging ourselves incompetent or unwilling to perform the duty devolving upon us; a power which will doubtless be exercised by the contractors with reference to their own interest, and little or no regard to the interest of the public.

Well, sir, let us advance one step further, and see whither the scheme proposed would carry us. When the contractors have designated their routes, there is to be surveyed for each road a tract of eighty miles in width, for the whole extent through the territories of the United States to the waters of the Pacific. Estimating the average length of the lines at twelve hundred miles, the quantity of land to be surveyed will be two hundred and eighty-eight thousand sections, involving an expense of between one and two milliens of dollars if the surveys can be obtained at the rates now paid.

But no one supposes, I apprehend, that the surveys can be made in the Rocky Mountains or even on the plains, at the rate now paid for surveying public lands. One of your engineers describes the country from the meridian of 97 degrees to the base of the Rocky Mountains, over six hundred miles, for the whole distance north of the parallel of 34 degrees north latitude.

Mr. Gwin. If that is true they will not select that route.

Mr. Geyer. The honorable Senator from California says, "they will not select that route." Well, sir, then there will be no road north of the 34th degree of parallel. The description given by the engineer embraces the whole country from that parallol to our northern boundary, and if his description has been accurate, it will be next to impossible to construct or maintain a railroad anywhere

between the 34th degree and the 49th degree of paralles. I refer to the report of Captain Pope, page 9:

"The great deserts, commencing about the meridian of 97 degrees, extend over a distance of six hundred miles to the eastern base of the Rocky Mountain." * * * "In this whole extent they are badly watered by a few sluggish streams which intersect them, many of which disappear altogether in the dry season, and are destitute absolutely of timber, except a sparse growth of dwarf cotton wood along tthe streams." * * *

"From the northern frontier of the United States, at the parallel of 49 deg., this immense region of desert country extends, without interruption. as far south as the parallel of 34 deg.; at this parallel its continuity is suddenly and remarkably interrupted."

He seems to entertain the opinion that the only practicable route is that explored by himself between the parallels of 32 deg. and 40 deg. The engineers who explored the routes further north report them to be practicable, and their description of the country examined by them is far more favorable. But, when interrupted, I was inquiring into the probable expense of the survey of two hundred and eighty-eight thousand square miles of country, most of which is uninhabited, and a large portion is mountainous and scarcely practicable, and another large portion of plains, which, though not inhospitable deserts, are invested by roving bands of hostile Indians. Every one must see that the surveys cannot be made at the ordinary rates, and the country will be involved in an enormous expense for surveys, preparatory to the construction of the roads.

Another objection which I take to this bill is, even if it provided for only one road, it, by its terms, interposes obstacles to its construction. I took occasion the other day to say that it is indispensable to the construction of a road at all, that you should have established military posts, and advance the settlements. In my judgment, that is not only not provided for in this bill, but it interposes obstacles which will prevent the settlement until after the road is commenced, or perhaps nearly finished. No settlement is to be allowed, nay, it is positively prohibited by the terms of the bill, until after the surveys are made. No grant is to be made to the contractors until they shall have constructed one hundred miles of road, and then only three fourths of the quantity of land due to that portion of the road is to be conveyed to them by patent.

You will observe then, Mr. President, that this bill provides that before there shall be any settlement or sale of the lands granted to the company, the road shall be made. Now, how is it with respect to the reserved sections? Is it true you grant pre-emptions by this bill, but you do not allow a man to go upon the land until after the survey is made, and you grant pre-emptions at $2.50 per acre. That is the price demanded for land on the prairies where there is no timber, and on the Rocky Mountains, where there is

only a small portion fit for cultivation. Who, that understands anything of the nature of the country, the privations and the dangers to which the settler is exposed, will settle in the wilderness, occupy your lands, and reduce them to cultivation upon the terms prescribed by this bill? Sir, the man who goes upon these lines of road and cultivates the land, is a public benefactor, and he ought not to be taxed at the rate of $2.50 per acre for the land he reclaims. It is very proper, doubtless, in countries which are settled, such as Illinois and Missouri, in which railroad grants have been made, to hold the lands reserved at double the minimum price; but in those cases the settlement and cultivation of the land is not necessary to the construction of the road, but the enhanced value is given to the land by the road before the purchase. Not so along the lines of road provided for by this bill; the settlement and cultivation of the lands, to a considerable extent, is indispensable to the success of the enterprise, to furnish supplies and shelter to those engaged in the construction of the work, and protect the road when built. This bill does not afford the necessary encouragement to settlers, and, practically, its provisions tend to defeat the construction of any road.

Mr. President, I have before adverted to the probable cost of the roads proposed, and the large increase of our liabilities, but I wish again to call the attention of Senators to that subject. Debtors as we are to the amount of $300,000,000 on account of roads in use, having under contract and in process of construction nearly 17,000 miles of road, to cost in round numbers $500,000,000. I submit it as a financial question, whether it is wise or prudent to invite, encourage and promote so large an increase of the demands upon our resources? It is true the money is not to be paid out of the Treasury, but it adds to the burdens of the country, and a pressure upon the people is as carefully to be avoided as the embarrassment of the Treasury. Already the demand created by the roads in the process of construction is ascertained to be beyond the available resources of the country, and many of the works are stopped altogether or prosecuted feebly and despondingly. The pressure in the money market has reduced railroad securities to almost a merely nominal value. Is it wise to create by a single act a demand for three or four hundred millions more? Ought we—can we afford to expend eight or nine hnndred millions upon railroads within the next ten years?

As an inducement to persons to undertake the construction of the proposed roads, the bill provides for a contract by which the Government is to pay for the transportation of the mails daily not exceeding $300 per mile, and for the transportation of troops and property at the rates now paid on other roads. That is, the bill contemplates three daily mails between the Mississippi and the Pacific, and the transportation of troops and property upon all the roads. The contracts are to be carried into effect, and the pay-

ments made for the transportation of the mails, troops and property upon the road, while in the course of construction, for the portion from time to time in operation.

Now, let us see how this will work. A road may be commenced at either or both ends, or anywhere along the line, and whenever any "portion s in use" the mails are to be transported upon it, or whether transported or not, payment is to be made at the contract price, $300 per mile. The mails and property are to be carried by railway from the beginning to the end of "the portion in use," and then other means of transportation must be provided for the residue of the way across the prairies and the mountains. The place of transfer will be advanced as additional portions of the roads are put in operation, but there must be at least one on each road until it is completed.

You may refuse to deliver the mails and property for transportation, but you cannot withhold payment. You must adopt other means of transportation the whole distance, or you must furnish them at the end of the road in use, at whatever part of the prairies or the mountains that may be. In either you must perform your contract, and pay the price agreed on. I do not misinterpret the bill. The second section contains the terms of the contracts to be made; the third clause provides for the contracts for carrying the mails and property of the United States "for the period of fifteen years from the completion of the road, and while in the course of construction for the portion in use." Yes, sir, they are to make a contract to carry the mails, military and naval stores, and other property, while the road is under construction, upon so much as is finished, and they are to leave them at the end of the road, to get forward in the best way they can.

Mr. President, I have thus taken a general view of the provisions of this bill, so far as it affects the country at large. I now propose to consider it with reference to its effects on particular States. The bill proposes to give to the contractors—not to the States—twelve sections of land per mile of road in the State of California; but contains no such provision for the road within any State west or east of the Mississippi. Illinois applied for a grant of land for railroad purposes, and it was hard work to obtain alternate sections for six miles in width. So with Mississippi and Arkansas. Iowa has not been able to obtain even such a grant to this day. If, as I suppose it may be intended, one of these roads shall go through Iowa, I think it would have been but fair to provide twelve sections per mile for the road through that State. We have a grant in Missouri of six sections per mile, to be selected within fifteen miles of the road, and not fifty, as in California.

I do not complain of the proposed grant in California, because that State is eventually to become the owner of the road within her limits, but of the discrimination made in her favor against the other land States. Illinois, Missouri and Arkansas, in consideration of

six sections of land per mile, are required to transport the mails at such price as Congress shall prescribe, and the troops and property of the United States free of charge. In California we propose to appropriate twelve sections of land per mile to pay for carrying the mails, $300 per mile, and for troops and property a full compensation. To this inequality I object, and, I may ask, why were the States west of the Mississippi, through which one of these roads may pass, altogether overlooked by the framers of this bill? Why not make the Eastern terminus of the central route (so called) on the west bank of the Mississippi, appropriate the same quantity of land per mile within the State through which it may pass, and afford the same inducements for the construction of the road as in California? Certainly there were no constitutional scruples to be overcome. If the provisions of this bill are wise and constitutional in respect to California, they would be no less so if extended to Iowa or Missouri. The objection to the discrimination in favor of California does not of course, address itself to Senators from the Atlantic States, and perhaps may not be appreciated by the Representatives from Missouri and other States immediately interested. To my mind, it is decisive against the bill.

Another, and to me an insuperable objection to the bill is, that it presents inducements to form combinations against the interests of the State which I in part represent, so that there is scarcely a remote possibility that the eastern terminus of either road shall be on her border. Ostensibly the bill fixes only the western terminus of the central road, and that at the Bay of San Francisco. But, in reality, it also terminates the eastern terminus of the southern road. The western "border of Texas" on the Rio Grande, above the north boundary of Mexico, being only about thirteen miles long. The contractors are to select the routes and fix the western terminus of the southern road, and the eastern terminus of the central. The southern road is to "commence on the western border of Texas, and pursue the most eligible route to the navigable waters of the Pacific, in the State of California." The contractors for this road will have a large discretion which will be used to their best advantage. Now, when the most valuable, if not the only valuable lands to be appropriated to that road, are in California, there can be no doubt, that the city of San Francisco will be the western terminus of the southern road. The contractors will have the power to fix that point, and will have no inducement to select any other. I hazard nothing in predicting that the undertakers of the road will find "the waters of the Pacific" mentioned in the bill, at or very near the city of San Francisco.

It is for the interest of California that the Central road should enter that State on the north, and proceed southward to the Bay of San Francisco. It will secure a road extending nearly the whole length of the State, which is eventually to become its property. The interest of the contractors for the southern road is, in this re-

spect, the same as that of the State. They would not desire a second road entering California south of San Francisco, to compete with theirs. The State and the southern company having thus a common interest, would make common cause, aud their united influence would be felt in the location of the Central route. Their efforts would be to secure a location as far north as practicable, in order to make the road within California as long and as valuable as possible.

Another and most powerful interest will be arrayed against that of Missouri, which, aided by California and the contractors for the southern road will secure the location of what is called the Central road, north of that State. According to the bill the contractors for that road may select any point on the west boundary of Iowa or Missouri as the eastern terminus, (though Iowa is not properly a central State,) a range of selection quite remarkable, when it is observed to how small a space the commencement of the southern, and even the northern, road is limited. Now, a road commencing north of Missouri, at Rock Island for example, and passing through the South Pass and Noble's Pass, to the Bay of San Francisco, would precisely accommodate northern Illinois and California. The northern road, which is to have its terminus on the west boundary of Wisconsin, will, of course, connect with some road to Chicago. Thus that city, and those who own the road thence to Rock Island, and those extending eastward, and who are engaged in the construction of the road from Rock Island westward, will all be accommodated.

The bill, therefore, presents irresistible inducements to a combination of all the interests to which I have referred. The South, and the contractors for the southern road, the States of California and Illinois, and the capitalists who own the road from Lake Erie, by Chicago to Rock Island, and through Iowa, are invited to cooperate in securing the location of the eastern terminus of the central road on the western boundary of Iowa. That they will cooperate can scarcely be doubted, and their success will be almost certain. Hence I am not surprised that the Senators from Illinois and California manifest so much earnestness in pressing this bill. If it secures the construction of any road, the States they represent, and probably Texas, will be more benefitted than all others.

As a member of the Senate, I have been at all times prepared to support any bill for a single road with adequate provisions to secure its construction. Though, as I stated a few days ago, I would prefer to commence at two points on the western boundary of the States, and proceed thence to a convenient point of junction in the Territory, and thence to the Pacific. I should not object to a proposition which left the whole frontier of the States west of the Mississippi open to selection for the terminus of the road, as the original bill proposed. If such a road were authorized or located, connections might be formed by roads from all the States not

touched by it. But the provisions of the amended bill under consideration are so obviously calculated, if not designed to exclude the middle States, and especially that which I in part represent, from sharing the benefits so lavishly bestowed upon others, that I should be inexcusable if I gave it my sanction. Sir, when Wall street, and the other interests I have named, are brought into competition with a State that relies exclusively upon her own resources to build her roads, as they are by this bill, the result is certainly against the State; so believing, it is my duty to oppose the measure.

Mr. President, I have now stated the principal objections I have to the bill, and, I believe, all that I intend to remark upon. My purpose in addressing the Senate was merely to place before my constituents my reasons for the vote I gave against a bill proposing to provide for the construction of a railroad to the Pacific, a measure in which they take much interest. I make no attempt to convince Senators of the validity of my objections. They have doubtless all long since made up their opinions. I could not suppose otherwise, when the Senate, by a very large majority, preferred the substitute to the original bill. Having now discharged my duty, as I think, though imperfectly, I take my seat, leaving the bill to the decision of the Senate.

ARTICLE VI.

(From the Nebraska Palladium.)

Shoshonee Falls.

The Shoshonee Falls are located on Snake, or Lewis' Fork, of the Columbia river, about five hundred and sixty miles east of the Dalles, on the Columbia, and about twenty-five miles east of the celebrated stream, described by Fremont as the subterranean river, in latitude about 43°. The country in the vicinity of the falls appears to be a continuous plain, extending north of Snake river some forty miles, to the great Salmon river chain of mountains. These mountains run nearly east and west, their rugged, pointed, snow-covered summit, presenting a most desolate and forbiding aspect. Far to the north-west this chain terminates in ridges which abruptly break away, leaving the line of vision, westward, entirely unobstructed, save by the blending together of earth and sky. South of Snake river, the plain continues nearly level, some ten miles to Rock river, and thickly covered with the wild sage, (Artimesia,) while to the west it becomes gently undulating, but presents no remarkable degression, tending to indicate a great fall of country. South of Rock river, the plain rises gradually back, and terminates in a series of low ridges, which lie at the foot of, and run parallel to the great Range of Snake river mountains.

These mountains, in general, lie in ridges, and separate the waters of Snake river from those of the Great Salt Lake Valley. They are high, snow-covered, and without timber, and appear extremely rugged and broken. A spur, from this chain gradually diminishing in height, runs in towards the river, about fifteen miles east of the falls, by which the view is bounded in a south-easterly direction. Rock river rises among these mountains, it is a handsome stream, wooded with willows, and flows twenty miles along the base of the mountains, diverging north-west, it crosses the plain through a deep, narrow, rocky valley, finding an outlet in Snake river. The emigrant road, leading to Oregon and Washington Territories, passes down the north bank of Rock river, and crosses it directly opposite the Falls. * * *

The plain continues almost level, till within about seventy-five yards of the river, and then suddenly descends four hundred and thirty feet steep abrupt banks to the water level of the river above the falls. The descent then becomes perpendicular one hundred and eighty five feet further, to the water level of the river below the Falls. On the north side, the banks are perpendicular from the level plain to the bottom, six hundred and sixteen feet, and consists of a solid wall of basaltic rock, lying in numerous strata one above another. Three hundred yards below the falls, on the south side, a small ravine, very steep, makes its way to the bottom. This ravine is partially chocked up by large blocks of stone, extending from the bottom, till within a short distance of the top. Clambering down over the stone and fallen timber, to the bottom of the valley, the view of the falls was both beautiful and sublime. The main body of the river falls east and west, the remainder falling in a south west direction, the volume of water, being broken near the centre, by a columnar mass of basaltic rock, rising several feet above the surface of the water. The falls consist of two sections perpendicularly. In the upper fall, which is only about ten feet, the water describes a semi-circle, with the outside or covexity of the circle down stream. The ledge of rocks which constitutes the upper falls, stands back from the lower or main fall, about twelve or fifteen feet, and the water of the entire river passes over them in an unbroken sheet, and then in the form of an obtuse angle, the angle pointing up stream, falls one hundred and seventy five feet to the bottom, making the entire fall, one hundred and eighty-five feet, and the extreme depth of the chasm through which the river flows, 616 feet. The width of the line of the fall I judged to be about two hundred and twenty-five yards from bank to bank. Much of the water, in its passage over the falls, is converted into a fine mist or vapor, which rising upward, in the form of a white cloud, remains suspended over the river and plain. A large mass of rock extending from the bottom of the ravine to the base of the falls on the south side, has been worn apparently by the action of the water, into many singular shapes, a number of smooth polished holes or cavities of various sizes, but generally circular in form, are found

upon its face. The appearance of these cavities is rather remarkable, as some of them are at least six feet in diameter, and extend from ten to sixty feet above the present level of the river. The top of this rock, which is probably two hundred feet high, gently rounded next the river, and rising gradually, though abruptly back to the prairie land, is covered with a beautiful green sward. Distributed over the rock, are dwarf cedars, and a few stunted pines, several of the latter growing near the edge, lean over, as if watching the bubling and boiling of the waters in the abyss below. Here also, many wild flowers were blooming in primeval beauty, mingling their odoriferous fragrance with the southern breeze, so gently wafted over the plain.

The water of the river, above and below the falls, extends from base to base of the rock bound shore, leaving no margin, although a quantity of debris fallen from the rocks above, has lodged along the edge of the river. The Rapids, and several small cascades, continue a half-mile or more, east and west of the falls, indeed, there is little doubt that the rapids continue more or less to the foot of Great Salmon Falls, 45 miles down the river, as our observations show an actual descent in the river, in that distance, exceeding 600 feet.

The appearance of the Great or Shoshonee Falls, at once suggested an explanation of the source of Fremont's subterranean river. There can be no doubt, I think, that the water passes under ground, from above the Shoshonee Falls, twenty miles, to the upper end of the Great Salmon Falls, reappearing in the form of cascades, nine in number, from between the basaltic rock strata, of which a great part of the plain appears to be composed. These cascades issue from the perpendicular rocks on the north side of the river, at unequal distances above the water level, and varying in height of fall, from six to thirty feet. The whole nine are included in a distance of about four hundred yards, they are very beautiful, and are seen to advantage from the Emigrant Road, on the south side, the valley having widened out, and the road passes along the river bottom, which here is about 50 yards wide. One mile below these cascades, are the Great Salmon Falls. The actual fall in low water is only about 8 or 10 feet, but the Rapids continue 15 miles below the falls, and the descent of the river in the distance is 328 feet.

The altitude of Shoshonee Falls above the ocean, is 3450 feet, and the valley in their vicinity, is very remarkable, appearing to have been rent in twain by some great convulsion of nature, that the waters constituting the sources of Snake river, may find a pathway through the great basaltic plain above mentioned to the ocean. The rapid descent of the various tributaries of the Columbia, is at once accounted for, when we come to remember, that the highest range of the Rocky Mountains does not exceed 1000 miles from the Pacific coast,—while on the eastern slope the rivers are nearly or quite double that distance in length, being also more numerous, and conseqnently less rapid in their descent. The altitu e of the main ridge varies from 6000 to 10,000 feet above the sea. The distance in which this height is overcome on the east side, exceeds 2000 miles, but on the west it is compressed into half that distance. The natural result is, that the rivers of the Pacific coast are navigable only a short distance from the ocean, consisting, as they do, of falls and rapids, a considerable portion of the way.

AGRICULTURAL DEPARTMENT.

AGRICULTURAL PRODUCTS OF THE UNITED STATES—1850 AND 1840.*

Agricultural Products.	1850.	1840.	Agricultural Products.	1850.	1840.
Horses	4,336,719	4,335,669 horses and mules.	Butter, pounds	313,345,306	.....
Mules and asses	559,331		Cheese, "	105,535,893	.....
Horses asses and mules	4,896,050		Butter and cheese	418,881,199	†$33,787,008
Milch cows	6,385,094	.....	Peas and beans, bushels	9,219,901	.....
Working oxen	1,700,744	.....	Market gardens	$5,280,030	$2,601,196
Other cattle	10,293,069	.....	Nursery products	.....	$593,534
Total neat cattle	18,378,907	14,971,586	Orchard "	$7,723,186	$7,256,904
Sheep	21,723,220	19,311,374	Beeswax and honey, pounds	14,853,790	wax 628,303
Swine	30,354,213	26,301,293	Poultry	.....	9,344,410
Value of live stock	$544,180,516	.....	Family goods	$27,493,644	$29,023,380
Value of animals slaughtered	$111,703,142	.....	Cords of wood	.....	5,088,891
Wheat, bushels	100,485,944	84,823,272	Flax seed, bushels	562,312	95,251 tons hemp and flax.
Rye, "	14,188,813	18,645,567	Flax, pounds	7,709,676	
Oats, "	146,584,179	123,071,341	Dew rotted hemp, tons	33,193	
Indian corn, bushels	592,071,104	377,531,875	Water " " "	1,678	
Irish potatoes, "	65,797,896	.....	Maple sugar, pounds	34,253,436	155,100,809 pounds.
Sweet potatoes, "	38,268,148	.....	Sugar, cane, hogsheads	237,133	
Total, "	104,066,044	108,298,060	Molasses, gallons	12,700,991	.....
Barley, "	5,167,015	4,161,504	Cotton, bales	2,445,793	1,976,198
Buckwheat, "	8,956,912	7,291,743	Rice, pounds	215,313,497	80,841,422
Hay, tons	13,838,642	10,248,108	Tobacco, "	199 752,655	219,163,319
Hops, pounds	3,497,029	1,338,502	Wool, "	52,516,959	35,802,114
Clover seed, bushels	468,978	.....	Silk cocoons, pouuds	10,843	61,652
Other grass seeds, bushels	416,831	.....	Wine, gallons	221,249	‡124,734

* From De Bow's Compendium of the Seventh Census.

† Dairy products.

‡ Amounts produced by individuals less than a bale, hogshead or ton of any agricultural product, where these measures are adopted, are not aggregated or reported. Hence a large production of such articles escaped enumeration. This is important to be observed in reading the county tables.

Ratio of Farm Land to Area and Crops to Population in the several sections of the United States—1850 and 1840.

Geographical Division.	Proportion of improved land to the whole in each section.	Proportion of occupied land to the whole.	Average value of occupied land per acre.	Average value of implements and machinery per acre.	Horses, asses and mules to each person.	Cows, working oxen and other cattle to each person.	Sheep and swine to each person.	Bushels of wheat, rye, barley and buckwheat to each person.	Bushels of corn to each person.	Bushels of Irish & sweet potatoes to each person.	Bushels of peas & beans to each person.	Value of home manufacture to each person.
New England	26.79	44.13	20.27	·70	.08	.54	.96	1.39	3.73	7.19	.17	.59
Middle States	35.72	57.82	28.07	1.04	.15	.53	1.26	8.40	9.12	4.00	.13	.35
Southern States	16.07	53.02	5.34	.25	.29	.99	2.49	4.19	28.22	5.39	1.12	1.79
Southwestern States*	10 17	32.44	6.26	.60	.29	.99	3.13	.77	39.45	5 49	.89	2.26
Northwestern States	12.90	31.47	11.39	.51	.29	.80	3.18	7.80	44.02	2.82	.08	1.45
California and Territories	.06	.75	1.89	.10	.27	1.90	2.46	2.97	2.20	.90	.19	.08
Non-slaveholding States	14.72	28.56	19.00	.77	.17	.64	1.80	7.31	18.06	4.39	.11	1.39
Slaveholding States	10.09	33.17	6.09	.36	.27	.95	2.84	3.11	36.12	4 64	.79	1.93
United States, 1850†	7.71	20.02	11.14	.51	.21	.77	2.25	5.55	25.53	4.49	.40	1.19
United States, 1840	.....	.....	.....	.....	.25	.88	2.67	6.73	22.12	6.34	.....	1.70

* Exclusive of Texas—area 237,504 miles; improved land 643,976 acres; unimproved 10,852,363 acres: value of farms $16,550,008; implements and machinery $2,151,704.

† Exclusive of unorganized Territories.

Value of the Agricultural Products of the U. S., 1850.

Products.	Value.
Indian corn	$296,035,552
Wheat	100,485,944
Cotton	98,603,720
Hay	96,870,494
Oats	43,975,253
Butter	50,135,248
Potatoes—Irish	26,319,158
Potatoes—sweet	19,134,074
Wool	15,755,087
Tobacco	13,982,686
Cane Sugar	12,378,850
Rye	7,803,847
Orchard products	7,723,186
Buckwheat	6,969,838
Peas and beans	5,762,436
Market garden products	5,280,030
Cheese	5,276,795
Hemp	5,247,430
Rice	4,000,000
Barley	3,616,910
Molasses	2,540,179
Beeswax and honey	2,376,606
Clover seed	2,344,890
Maple sugar	1,712,671
Hops	1,223,960
Flaxseed	843,468
Grass seeds (other than clover)	833,662
Flax	770,967
Wine	442,498
Silk cocoons	5,421
Live stock, over 1 year old—annual product	175,000,000
Animals slaughtered	55,000,000
Poultry on the basis of 1840	13,000,000
Feathers	2,000,000
Milk, (not included in butter and cheese)	7,000,000
Eggs	5,000,000
Cord wood on the basis of 1840	20,000,000
Home made manufactures—one half for agricultural part. (*Tucker.*)	13,746,822
Small crops—basis of Rhode Island for onions, carrots, &c.	5,000,000
Residuum of crops, not consumed by stock, corn fodder, cotton, seed, straw, rice flour, and manure, (Patent Reports)	100,000,000
Cattle, sheep and pigs, under one year old	50,000,000
Add for orchard and garden products of cities, not included above—milk, butter, poultry, horses, cows, &c., in cities and towns	15,000,000
Total agricultural products—1849, 1850	1,299,197,682
To which add for increase since 1850, and for the greater value of agricultural products would give total for 1854	1,600,000,000

Land actually cultivated in the several crops of the United States, 1849—'50.

Products.	Acres.
Indian corn	31,000,000
Meadow or pasture lands—that proportion which is regarded improved, and exclusive of hay crop	20,000,000
Hay	13,000,000
Wheat	11,000,000
Oats	7,500,000
Cotton	5,000,000
Rye	1,200,000
Peas and beans	1,000,000
Irish potatoes	1,000,000
Sweet potatoes	750,000
Buckwheat	600,000
Tobacco	400,000
Sugar	400,000
Barley	300,000
Kice	175,000
Hemp	110,000
Flax	100,000
Orchards	500,000
Gardens	500,000
Vineyards	250,000
Other products	1,000,000
Improved, but not in actual cultivation	17,247,614
Total improved lands	113,032,614

It would thus appear that the actual crops do not account for 17,247,614 acres, which are returned as being improved. It is possible the total reported as improved is exaggerated by a part of this difference, say 9,000,000 acres, which would leave about 8,000,000 for waste, yet improved lands.†

* Professor Tucker estimated the crop of 1840 at $654,387,597. It was no doubt nearer $800,000,000.

† The New York State Census of 1845 reports 11,757,276 acres improved land, a near approximation to the United States census of 1850. Of this amount only 3,851,594 were cultivated in barley, peas, beans, buckwheat, turnips, potatoes, flax, wheat, corn, rye, and oats, leaving nearly eight millions for meadows, hay, gardens, orchards, &c., and unaccounted for. The State reports of Ohio for 1851 show 1,677,253 acres in wheat, and 1,664,429 acres in corn.

Number of Cotton, Sugar, Rice, Tobacco, and Hemp Plantations.

States.	Number of cotton plantations raising 5 bales and over.	No of sugar planters.	Number of rice plantations each raising 20,000 lbs. and over.	No. of tobacco plantations each raising 3,000 lbs. and over.	Number of hemp planters.
Alabama	16,100	.....	.....	.....	.....
Arkansas	2,175	.....	.....	.....	.....
Florida	990	958	.....	.....	.....
Georgia	14,578	.....	80	.....	.....
Kentucky	21	.....	.....	5,987	3,520
Louisiana	4,205	1,558	.....	.....	.....
Maryland	.....	.....	.....	1,726	.....
Mississippi	15,110	.....	.....	.....	.....
Missouri	.....	.....	.....	.....	4,807
North Carolina	2,827	.....	25	.....	.....
South Carolina	11,522	.....	446	.....	.....
Tennessee	4,043	.....	.....	2,215	.....
Texas	2,262	165	.....	.....	.....
Virginia	198	.....	.....	5,817	.....
Total	74,031	2,681	551	15,745	8,327

There are in the Southern States 74,031 cotton plantations, including all producers of more than five bales, 2,681 sugar planters including the smallest; 551 estates making more than 20,000 pounds of rough rice each; 15,745 tobacco estates of 3,000 pounds each and over in Kentucky, Tennessee and Virginia; 8,327 hemp planters in Kentucky and Missouri. Only such States are taken as are considered crop States.

Ratio per cent. of Population and certain Products

States and Territories.	Population.	Wheat.	Indian corn.
Alabama	3.33	.29	4.86
Arkansas	.91	.20	1.50
California	.4	.02	.....
Columbia, District of	.22	.02	.01
Connecticut	1.6	.04	.33
Delaware	.39	.48	.53
Florida	.38	.....	.34
Georgia	3.48	1.08	5.08
Illinois	3.07	9.37	9.73
Indiana	4.26	6.18	8.95
Iowa	.83	1.52	1.46
Kentucky	4.24	2.13	9.91
Louisiana	2.23	.....	1.73
Maine	2.51	.29	.3
Maryland	2.9	4.47	1.82
Massachusetts	4.29	.03	.40
Michigan	1.71	4.90	.95
Mississippi	2.92	0.14	3.79
Missouri	2.94	2.97	6.12
New Hampshire	1.37	0.18	0.27
New Jersey	2.11	1.60	1.48
New York	13.36	13.06	3 02
North Carolina	3.75	2.12	4.72
Ohio	8.54	14.42	9.97
Pennsylvania	9.97	15.29	3.35
Rhode Island	0.64	.....	0.09
South Carolina	2.88	1.06	2.75
Tennessee	4.32	1.61	8.83
Texas	0.92	0.04	1.02
Vermont	1.35	0.53	0.34
Virginia	6.13	11.16	5.95
Wisconsin	1.32	4.26	0.34
Territo's. Minnesota	0.03	.....	.....
New Mexico	0.27	0.19	0.06
Oregon	0.06	0.21	.....
Utah	0.05	0.10	.....

in the States to the total of the United States.

Rice.	Tobacco.	Cotton.	Wool.	Hemp.	Sugar.
1.07	·08	23.08	1.25	.....	.04
.03	.11	2.67	.35	.04	.....
.....	.....	.....	.01	.....	.....
.....	.....	.....	.....	.....	.....
.....	.63	.....	.95	.....	.....
.....	.....	.....	.11	.....	.....
.5	.5	1.85	.4	.....	1.16
18.09	.21	20.41	1.88	.....	.36
.....	.42	.....	4.10	.....	.....
.....	.52	.....	4.97	.....	.....
.....	.....	.....	.71	.....	.....
.....	27.78	.03	4.37	51.01	.....
2.05	.01	7.31	.21	.....	95.31
.....	.....	.....	2.6	.....	.....
.....	10.72	.....	.91	.18	.....
.....	.07	.....	1.11	.....	.....
.....	.....	.....	3.91	.....	.....
1.26	0.02	19.80	1.07	0.02	.....
.....	8.57	.....	3.10	45.96	.....
.....	.....	.....	2.11	.....	.....
.....	.....	.....	0.71	.....	.....
.....	0.04	.....	19.18	0.01	.....
2.54	6.0	2.07	1.85	0.11	.....
.....	5.23	.....	19.41	0.43	.....
.....	0.46	.....	8.53	0.13	.....
.....	.....	.....	0.25	.....	.....
74.28	0.04	12.30	0.93	.....	.03
0.12	10.09	7.95	2.60	1.7	.....
0.04	0.03	2.37	0.25	.....	3.10
.....	.....	.....	6.47	.....	.....
.....	28.44	0.16	5.45	*0.4	.....
.....	.....	.....	0.48	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	0.06	.....	.....
.....	.....	.....	0.05	.....	.....
.....	.....	.....	0.02	.....	.....

* Crop underrated. In 1852, Virginia reports gave 3,450 tons dew-rotted hemp, and 1,149 tons water-rotted.

Actual Crops per acre on the average as

States.	Wheat, bush.	Rye, bushels.	Indian corn, bushels.
Alabama	5	.....	15
Arkansas	10	.....	22
Connecticut	.....	.....	40
Delaware	11	.....	20
Florida	15	.....	.....
Georgia	5	7	16
Illinois	11	14	33
Indiana	12	18	33
Iowa	14	.....	32
Kentucky	8	11	24
Louisiana	.....	.....	16
Maine	10	11	27
Maryland	13	18	23
Massachusetts	16	13	31
Michigan	10	.....	32
Mississippi	9	.....	18
Missouri	11	.....	34
New Hampshire	11	14	30
New Jersey	11	8	33
New York	12	17	27
North Carolina	7	15	17
Ohio	12	25	36
Pennsylvania	15	14	20
Rhode Island	.....	16	.....
South Carolina	8	.....	11
Tennessee	7	7	21
Texas	15	.....	20
Vermont	13	20	32
Virginia	7	5	18
Wisconsin	14	.....	30

returned by the Marshals for 1840–50.

Oats, bushels.	Rice, lbs.	Tobacco, lbs.	Seed cotton, lbs.	Peas & beans, bushels.	Irish potatoes, bushels.	Sweet potatoes, bushels.	Barley, bush.	Buckwh't, bu.	Hay, tons.	Hops, lbs.	Hemp, dew rotted.	Cane sugar, pounds.
12	.....	.....	525	12	60	200	...	...	...	...	.....	.....
18	.....	.....	700	.....	.....	100	...	...	...	...	.....	.....
21	.....	.....	.....	.....	85	.....	...	20	...	...	.....	.....
20	.....	.....	.....	.....	.....	.....	..	10	...	...	.....	.....
.....	1,850	.....	250	.....	175	.....	...	...	...	...	.....	750
18	.....	.....	500	5	125	400	...	...	...	...	.....	.....
29	.....	.....	.....	.....	115	.....	40	15	1½	...	.....	.....
20	.....	.....	.....	.....	100	.....	25	25	1	...	.....	.....
36	.....	.....	.....	.....	100	.....	...	...	...	...	.....	.....
18	.....	575	.....	.....	130	65	...	...	1½	...	650	.....
.....	1,400	.....	550	.....	.....	175	...	...	...	...	.....	1000
20	.....	.....	.....	.....	120	.....	20	...	⅞	...	.....	.....
21	.....	650	.....	.....	75	.....	...	...	1	...	.....	.....
26	.....	.....	.....	.....	170	.....	21	...	1	...	.....	.....
26	.....	.....	.....	.....	140	.....	...	14	...	...	.....	.....
12	.....	.....	650	12	105	.....	...	...	...	...	.....	.....
26	.....	775	.....	.....	110	.....	...	...	1¼	...	775	.....
30	.....	.....	.....	.....	220	.....	22	...	1	...	.....	.....
26	.....	.....	.....	.....	75	.....	18	16	...	...	.....	.....
25	.....	.....	.....	.....	100	.....	25	22	1⅛	950	.....	.....
10	.....	.....	.....	.....	65	.....	...	...	...	...	.....	.....
21	.....	730	.....	.....	75	.....	30	20	1⅝	...	.....	.....
22	.....	.....	.....	.....	75	.....	...	...	1¾	...	.....	.....
30	.....	.....	.....	.....	100	.....	18	...	...	...	.....	.....
12	1,750	.....	320	18	70	.....	...	...	...	...	.....	.....
19	.....	750	300	.....	120	.....	...	...	...	...	.....	.....
.....	.....	.....	750	.....	250	45	...	...	...	...	.....	.....
26	.....	.....	.....	20	178	.....	...	25	1	...	.....	.....
13	.....	660	.....	.....	75	.....	...	7	1	...	.....	.....
35	.....	.....	.....	.....	125	.....	18	...	...	...	.....	.....

MINING AND METALS.

From the Mining Magazine.

Gold Mining in California.

The Governor, in his message to the Legislature of California, presents the following survey of mining operations for the year 1854.

Throughout the mining region, extending about six hundred miles in length—from the Four Creeks to the Oregon line—and averaging not less than forty-five miles in width, many highly important and useful improvements have been made, especially in the excavation and construction of canals and ditches of great length, designed to supply with water, at all seasons of the year, locations known as "dry diggings."

By means of these canals and ditches, water is conveyed from the principal rivers and distributed over vast districts of mining country, enabling thousands of enterprising and industrious men diligently, and at all seasons of the year, to prosecute their labors, and to increase immensely the amount of gold annually obtained.

These improvements, now so indispensable to the rapid and complete development of our vast mineral resources, it is believed can, and, it is hoped, will be so managed in accordance with the local mining laws by those having control, as to render them alike efficient in advancing the interests of labor and yielding just returns to capital invested.

Heretofore, during the summer months, miners have been compelled to abandon valuable claims—in fact, whole districts of country—for the reason that sufficient water could not be obtained for mining purposes. But during the past year much has been done to overcome this great obstacle, and now, by means of canals and ditches, water—the necessary, in fact indispensable element in successful mining—is conveyed in abundance to the door of the miner, and it is confidently believed that in future a large portion of our mining population will be enabled to pursue their labors profitably to themselves, and to the increased prosperity of the State, throughout all seasons of the year. This is a *desideratum* properly appreciated by those of our citizens who have been compelled in former years, for want of water, to forsake the richest sections of the country.

From the increased facilities afforded by improvements in machinery, much advancement has also been made in obtaining gold embedded in quartz rock. Large and well constructed mills have been erected in various parts of the State, and immense quantities of the precious metal extracted from the numerous veins of auriferous quartz which penetrate the hills of California.

Improvements suggested by past experience in the implements used by the river, placer, and gulch miner, have greatly diminished

the labor heretofofore rendered necessary in separating the gold from sand and rock. Indeed, we have every reason to congratulate ourselves on the many and varied improvements in all departments of mining operations, facilitating as they do the extraction of gold, developing the inexhaustible mineral resources of the State, and opening an enlarged field to the industry and enterprise of our citizens, as well as adding vastly to the already unparallaled wealth of California.

From a portion of the mining counties I have been enabled to obtain information in relation to investments made in canals, ditches, and quartz machinery, as follows:

OPERATIONS IN QUARTZ.

Counties.	No. of Comp's.	Capital.	Expenses.	Receipts.
Nevada,	5	$700,000	$299,870	$716,000 00
Shasta,	1	27,000	19,200	53,000 00
El Dorado,	5	140,000	119,892	490,000 00
Amador,	6	140,000	213,166	412,000 00
Total,	18	$1,007,000	$652,128	$1,671,000 00

These eighteen companies have been in successful operation during the past year, and the above figures, obtained upon careful inquiry, may be regarded as nearly correct.

It is proper here also to state that fourteen other companies, four in Siskiyou and Klamath, two in Nevada, one in Sierra, two in Placer, one in Tuolumne, and four in Mariposa, have also been in successful operation, and doing quite as well during the past year as the eighteen above referred to, but as no returns have been received from them they are not included in the above.

It is also known that during the latter part of the year sixteen other companies commenced operations in the following named counties, and with capital stock as below stated.

	No. of Companies.	Capital Stock.
Placer,	1	$22,000 00
Nevada,	6	104,000 00
El Dorado,	4	46,000 00
Amador,	3	18,000 00
Tuolumne,	2	50,000 00
Total	16	$240,000 00

These new companies, it is understood, all commence operations with very flattering prospects of success.

CANALS AND DITCHES.

	No. of miles.	Value.
El Dorado,	173	$380,000 00
Calaveras,	180	369,000 00
Tuolumne,	185	400,000 00
Amador,	129	298,000 00

Placer,	160	330,000 00
Nevada,	208	400,000 00
Sierra,	129	117,000 00
Total,	1,164	$2,294,000 00

In addition to the above, in the same counties, and in others, there is quite a number of canals and ditches, which, within a few months will be in actual use, contributing greatly to the general prosperity of the mining region.

Gold, as before stated, is to be found in more or less abundance throughout a district of country six hundred miles in length by forty-five in width. It is found in varied quantities, from the surface to the bed-rock, which is sometimes only reached at a depth of two hundred feet.

By means of these extensive and valuable improvements, water sufficient for mining purposes will be gradually distributed over the entire mining region, and millions of acres not now known certainly to possess gold, will be found to abound with the glittering ore.

Actual observation, and the experience of the past, have satisfied me that fifty years hence, when most of those now prominent on the stage of action, shall have passed away, it will be said that mining operations in California have but fairly commenced.

Reports of Gold shipped from California.

The following is the amount of gold bullion exported to Europe and the Atlantic States, as exhibited by manifest at the Custom House, San Francisco, during the years 1853 and 1854:

1853.	1st Quarter,	$15,157,913 58
"	2d "	14,095,035 18
"	3d "	12,241,476 19
"	4th "	15,336,023 18
	Total—1853,	$56,830,448 93
1854.	1st Quarter,	$9,764,702 96
"	2d "	13,786,458 01
"	3d "	13,794,760 47
"	4th "	13,088,752 00
	Total—1854,	$50,434,873 44

Amount and value of quicksilver, the product of the State of California, shipped from San Francisco during the year 1854:

20,000 flasks, weighing 75 lbs. each, making 1,500,000 lbs. at fifty cents per lb.	$750,000 00

(From Herapath's Journal.)

Gold and Specie arriving in Great Britain during 1854.

The following are the net arrivals of gold and specie that is the excesses of the published arrivals over the departures for each of the twelve months of the past year 1854, up to the 30th of December:

January	£2,161,270
February	1,367,540
March	748,130
April	1,552,041
May	2,261,700
June	1,621,906
July	1,784,459
August	1,726,873
September	2,473,110
October	2,710,133
November	1,415,747
December	1,577,224
Total for the year	£21,400,133

This is exclusive of sums brought and sent away by private individuals, loans, &c.

In the following table, which has cost no little labour, from its size, to compile, the imports of the precious metals are apportioned to the countries from which they were shipped. It should be observed that these are the imports irrespective of exports to them or any other places. Imports are not included which are trifling in amount or from places which send us but little gold.

In the last column, under the head South America, Pacific, &c., is included £253,000 from the East Indies; £388,000 from Mexico; and £40,000 from Russia.

	U. States.	Australia.	W. Indies.	S. America. Pacific, &c.
January	£453,530	£80,000	645,710	£265,000
February	58,900	1,282,240	310,000	.....
March	57,410	444,100	567,000	125,100
April	339,430	1,430,470	309,370	44,300
May	735,190	984,000	108,320	10,700
June	789,360	996,600	560,000	.....
July	1,088,320	865,000	.....	466,700
August	810,140	627,120	404,000	86,480
September	1,474,990	532,670	423,100	61,360
October	1,167,760	1,113,890	299,190	36,000
November	1,138,230	559,290	5,000	508,800
December	491,490	513,500	714,820	8,690
Totals	£8,604,750	£9,428,880	£4,346,510	£1,573,130

This table shows that we had nearly as much of the precious metals from the United States as from Australia, and about half as much from our West India colonies as from America. The balance of trade, therefore, has been greatly in our favour from all three places. But it is a remarkable fact that our unbalanced exports from America, if the payments were at all of short date, were much greater during the last than the first six months of 1854, that is during the wilder part of the American mania. In December, however, the returns of gold fell off to less than half the average of the preceding five months, no doubt owing to the rupture of American credit and the fear of our merchants to export.

The Australian trade, measured by a similar rule, showed much more done in the first half of 1854 than in the last, which is easily accounted for by the markets being glutted by our wild exportations to that colony.

It is worthy of remark that according to the gold returns our unbalanced exports—which usually though not always truly considered a measure of our advantage by the trade—are only about one-sixth to South America, the Pacific, &c., of what they are to our Australian colonies.—(*Am. R. W. Times.*)

QUARTZ MINING IN AUSTRALIA.

Some very fine specimens of auriferous quartz, stated to have brought down by Mr. Shaw, from the M'Ivor gold field, were yesterday exhibited at the Chamber of Commerce. We have seen Mr. Shaw, who states that he has traced the quartz lode for 7 miles; that it averages two feet thick: and that everywhere he has found it to be auriferous. The quartz we have seen is extremely rich in gold, and if the specimens are anything like an average, it seems certain we are only in the infancy of gold digging. Mr. Shaw is one of a party who are doing well by hand-crushing. They have sunk fourteen feet from the lode, and find it continue of equal bulk. The want of machines is extremely felt, and the diggers are organizing a company to procure a Berdan. For our parts we think that the capitalists of the colony could not do better than send for a dozen Berdans, as there seems to be, at M'Ivor, Mount Alexander, and Bendigo, alone profitable work for them for any length of time. An experienced colonist has suggested to us, that probably the best plan for the towns-people, would be to subscribe a sum to pay the travelling expenses of a number of gentlemen of established character, who should examine the various diggings, collect specimens of quartz from the lodes, and get them tested. This would afford a business-like basis for the establishment of quartz-crushing companies, and push the colony forward in the career of gold production more effectually than by any other plan.

From the Mining Magazine

(From the American Railway Times.)

The Iron Trade of Great Britain.

During the past year there have been considerable fluctuations in the prices of manufactured iron, and the position and prospects of the iron trade have undergone a decided change. The year began with an advance of 20*s*. per ton, warranted by a previous advance on all the raw materials employed in the manufacture, and an immense influx of orders from all quarters, which considerably exceeded the capabilities of production. The advance was well responded to in America, and the trade continued in so prosperous a condition, and the demand so largely in excess of the make until about July, that in that month a further advance of 20*s*. per ton was declared. The makers were, so to say, compelled to take this step to keep pace with the ever rising price of the raw material; but those adverse influences which then threatened the prosperity of the trade, and made the advance a decision of questionable policy, soon developed the gravity and the magnitude of their character. In America, the financial pressure, which, instead of passing away, as was hoped from month to month, soon took the nature of a commercial crisis, and caused a growing stagnation of trade. In this country, the war, with its prospective great demands upon the resources of the community, and its effect of diverting capital from the usual necessities of trade into other channels, cooperated to cause a retrograde movement in the iron trade. In the United States the advance of last July was never responded to, and already in August and September, some of the inferior brands of iron, and particularly sheets and plates, receded in consequence; and although no alteration was declared at the October quarter, prices were not sustained, and the want of orders was seriously felt.

The year has closed gloomily. A vast amount of capital has been expended throughout the iron districts in putting up new furnaces and new works, with a view to adapt the powers of production to the great demand in the early part of last year; and now that most of these works have begun their operations, or are ready to do so, the demand has entirely passed away, and is not even sufficient to keep the old works well employed. This refers particularly to those manufacturers, who have principally depended for their sales upon the American market—those engaged in the home and continental trades being still moderately employed.

At the quarterly meetings of the iron makers, held last week, a reduction of £2 per ton was agreed upon, in the hope that this decline would call forth orders.

We subjoin a statement of the total exports of iron, &c., from this port to the United States and Canada; as also their distribution among the various ports of destination, for the years 1854 and 1853; also a table of Scotch manufactured iron from Glasgow to the United States and British North America, during 1854.

Comparative View of the Exports of Manufactured Iron, &c., from Liverpool during the Years 1853–54.

	1853. Tons.	1854. Tons.		Tons.
Exports from Liverpool to the United States	301,675	232,520	Dec.	69,245
Exports from Liverpool to British North America	25,999	30,728	Inc.	4,729
Total exports	327,674	263,148		

Thus showing a decrease of 69,255 tons in the exports to the United States, and an increase of 4,729 tons to British North America, during the year 1854, against 1853.

Exports from Liverpool to the United States, 1858–54.

Decription.	New York 1853. tons.	New York 1854. tons.	Boston 1853. tons.	Boston 1854. tons.
Rods, bars and bolts	46,821	56,456	19,794	23,024
Hoops and bands	6,538	7,325	1,381	1,429
Sheets and plates	13,786	10,718	2,277	3,413
Rails	61,786	23,500	130	1,583
Pig iron	38,023	27,822	5,422	6,709
Tin and terne plates	22,632	17,235	1,370	2,359
Total	189,635	143,056	30,374	38,517

Description.	Philadelphia 1853. tons.	Philadelphia 1854. tons.	Total to United States 1853. tons.	Total to United States 1854. tons.
Rods, bars and bolts	12,609	9,940	97,300	99,935
Hoops and bands	1,247	1,022	10,220	10,677
Sheets and plates	1,875	1,221	19,104	16,096
Rails	.....	279	86,497	34,652
Pig iron	10,704	9,681	61,732	49,136
Tin and terne plates	1,029	519	26,793	21,924
Total	27,464	22,662	301,675	292,420

Exports of Scotch Manufactured Iron from Glasgow to the United States during 1854.

	Tons.
Boston	976
New York	546
San Francisco	77
Philadelphia	57
Total	1,656

Scotch pig iron, after ranging from 75*s.* to 85*s.* per ton during the first nine months of the year, receded about 15*s.* per ton in November, and closes to-day at 69*s.* 6*d.* per ton for No. 1 American brands, and 66*s.* 6*d.* per ton for mixed Nos. other good brands in Glasgow.

The stocks in Glasgow were estimated—	Tons.
31st December, 1852	450,000
31st December, 1853	245,000
31st December, 1854	130,000

Showing a decrease of 115,000 tons during the past year, or 320,000 tons during the past two years.

The exports of Scotch pig iron to the United States were during

		1853.	1854.
New York,	tons	84,378	60,186
Boston,		38,342	32,638
Philadelphia,		15,075	14,993
Baltimore,		2,631	2,382
Providence,		3,755	6,242
New Orleans,		9,807	4,844
San Francisco,		50	40
Sundry ports,		1,800	2,548
Total,		155,847	113,873

Showing a decrease of 41,974 tons during 1854, as compared with 1853.

There has been little fluctuation during the year in tin plates. The manufacture was not renumerative, and the make has been considerably decreased. In our first comparative table we have given the estimated weight of the exports of tin and terne plates during 1853–54. We here subject a statement showing the total number of boxes exported to the United States and Canada during the period, with the increase and decrease to the ports specified:

	1853.	1854.	Decrease.	Increase.
To New York, boxes	439,949	349,583	90,366	
To Philadelphia,	26,715	11,019	15,696	
To New Orleans,	35,451	30,234	5,217	
To Balt. and Chs'ton,	2,553	3,777		1,224
To Boston,	31,192	47,267		16,075
To Canada,	17,280	30,460		13,180
Total boxes,	553,140	472,340	111,279	30,479

Showing a decrease in the year 1854 of 80,800 boxes compared with the preceding year.

Copper and yellow metal have been quite stationary during the whole of 1854.

Circular of Naylor, Vickars & Co.

COMMERCE AND MANUFACTURES.

Commerce and Manufactures of Boonville, Mo.

The following statement copied from the *Boonville Weekly Observer*, appears to have been made up by Hon. H. B. Benedict, Mayor of that city, who seems to have collected his facts with commendable care. He says:

"I have obtained a statement from every house in every branch of business, herein reported, taken from the record. I believe the exhibit may be relied upon as substantially correct. Our present population is about three thousand; the value of city property, as assessed by the city in 1854, is $453,000; the city revenue for the same year, from all sources, is about $3,200. This is considerably less than the preceding year. Our city has no debt, and not an empty treasury. This state of things induced a lower rate of taxation in 1854 than formerly.

The rate for 1854 was fixed at 3-10 of one per cent. In the following exhibit, no fictitious figures are used, and should facts fail to please, it will be misfortune not fault.

We have exported from this city, during the year 1854, the following articles:

Flour, barrels	3052	Peltries, bales	223
Lard, "	1381	Furs, "	188
Wax, "	35	Buffalo Robes, "	61
Flax seed, "	311	Wool, "	95
White beans,	125	Rags, "	1
Butter, "	108	Feathers, bags	360
Eggs, "	9	Timothy Seed, "	71
Tallow, "	29	Castor Beans, "	6
Peach Brandy,	7	Sumac, "	182
Green Apples	406	Merchandize, boxes	197
Pork, "	85	Lead, pigs	3682
Pecans, "	10	Dry Hides,	2742
Bacon, casks	801	Tobacco, hogsheads	55
Wheat, sacks	4690	" boxes	9
Dry Fruit, "	4236	Leather Rolls	11
Corn, "	18	Mustard Seed, bushels	6
Oats, "	286	Chickens, dozen	143
Potatoes "	37	Turkies	760
Hemp, bales	24	Broken Glass, 1¼ tons.	

Shipment of Live Stock, Hogs, &c. — By the river: 2,300 heads of cattle, 3,000 hogs, 3,200 sheep. Driven by land: 3,700 cattle, 850 mules, 150 horses.

Slaughtered in the city: 5,000 hogs, 498 beeves, 700 mutton.

The stock, &c., shipped, driven and slaughtered, at fair valuation, amounts to $460,000.

We have the following number of establishments, manufacturing and trading, in manner and to the extent herein represented. To

some extent, a mixed business is done by Dry Goods and Grocery Dealers. They are classed by the preponderance in either branch of business.

TRADE. — Amount of business in 1854: We have 9 wholesale and retail Dry Good houses, including

1 Hat and Cap store,	$400,703
10 Wholesale and Retail Grocers,	408,700
1 Dealer in Books and Stationary,	12,000
1 Dealer in Iron, Castings, Smith Tools, &c.,	11,538
1 Dealer in Glass and Queensware,	3,300
2 Druggists,	37,000

MANUFACTURES AND TRADE.

	Value of Manf'd goods.	Whole amount of business.
7 Tailors and Merchant Tailors and dealers in clothing,	$12,900	$74,400
6 Boot and Shoe Manufactures and dealers,	14,755	32,661
4 Watchmakers and dealers in Jewelry,	3,500	14,000
2 Tin and Copper ware Manufactures and Stove dealers,	18,000	32,000
4 Cabinet ware Manufactories and dealers in eastern work,	5,900	13,100
3 Saddle and Harness Manufactories,	17,000	22,000
3 Confectionaries, Manufactured Candies,	3,150	6,500
8 Tobaccionists, manufactured 400 boxes Tobacco, 378,000 Cigars,	11,840	11,840
1 Tallow Chandler, Manufactured 15,000 pounds Candles,	2,100	2,100
1 Spanish Saddle-tree Manufac., 400 trees,	600	600
1 Carriage Manufacture, with Blacksmith shop annexed,	7,000	7,000
1 Stoneware, manufact'd 250,000 gallons,	20,000	20,000
1 Tanner, manufactured leather,	3,000	3,000
1 Upholster and Trimmer,	1,500	1,500
1 Marble and tomb-stone manufacturer,	2,500	2,500
1 Brewery, five months in operation, 300 barrels beer,	1,800	1,800
1 Steam Flouring Mill, manufac'd 10,000 barrels Flour,	70,000	
10 Blacksmith Shops, nearly all with Plow or Wagon shops attached thereto, manufac'd 535 plows, 175 wagons, other shop work in value $8,360, whole value,	25,557	25,557
7 Cooper Shops, man'd 3,791 Flour bbls., 783 Pork bbls., 946 Whisky bbls., 802 Bacon casks, 221 Slack kegs, 32 Scalding tubs and Well buckets, other work in shops, $575,	5,768	5,768

2 Lumber Yards, lumber sold,		26,694
2 Shops—one a Turning, the other a Gunsmith,	850	850
	$227,720	1,177,111

The amount and value of our manufactures, have been imperfectly known and not fully appreciated. The amount of stock, &c., shipped and slaughtered together with the same driven from our county, attach an importance to stock raising, not hereeofore fully comprehended, representing the value of 460,000 surplus stock in our county in one year. In our exhibit of the value of manufactures of our city, we have included the value of flour manufactured in the city; but it is not so included in the amount of our entire trade, as part of it was shipped, and much of it was sold through business houses and included in their sales.

We have in our city 1 Banking House, 3 large and commodious Public Houses, 2 Livery Stables, weil supplied with all necessary appliances, 3 Barber shops, 2 Resident Dentists, 2 Resident Daguerreotypists, 2 Printing Offices; 1 Bookbindery, 7 Schools, 3 of which rank high among Institutions of Learning, 6 Churches, attended on the Sabbath-day by large and devoted audiences. In fact, we have everything necessary to render a people contended and happy if properly directed and appreciated.

In reference to our forwarding business, some idea can be formed from the following:

Forwarding Business. — Five houses have given from their receipt books, the number of wagons loaded by them during the year 1854, which is 3804, about $\frac{3}{4}$ of which were goods forwarded. Our fellow-citizen, John Porter, Esq., kindly furnished us with an account from his books, of the amount of freights collected by him and paid to the boats during 1854: For up freights landed at our wharf $85,995 39. This fails to include all freight bills paid, as movers and others paid their own bills.

Our city has the reputation of being the healthiest place in the State, having entirely escaped cholera and other epidemics which have almost decimated some points on the river, and it enjoys many important natural advantages, such as location, accessibility, &c., But advantages of this kind are so universally claimed that such information contains little to instruct the reader."

In his notice of the foregoing statement, the Editor of the "Observer" says:

"Many of our exports were limited last year, because the season did not afford an excess beyond what was necessary for home consumption. The failure of the corn crop limited the exports of oats, required at home as a substitute for feed, and there being little

corn-fed pork in the market, there was consequently less bacon and lard for export. The failure of the great staple, corn, also crippled stock raisers, and materially lessened the exportation of stock. It may be safely inferred that in ordinary seasons, our exports will exceed that of last year 100 per cent. at least. Flour, Wheat, Dried Fruit, Lead, Cattle, Mules, Horses, Hogs and Sheep were our principal exports; the live stock, shipped, driven and slaughtered, amounting in value to the sum of $460,000. Sumac and Broken Glass are new articles of export.

The trade of our city, although lessened by an unfavorable year for the agriculturist, reacting upon all other pursuits, amounts to the sum of $1,147,111, independent of a large amount of business not included in the table of figures.

COMMERCE OF ST. LOUIS.

Steamboats arrivals at the port of St. Louis each month during the year 1854.

January, . . .	2	July, ...	258
February, . . .	113	August, . . .	225
March, ...	341	September, . .	248
April, ...	335	October, . . .	281
May, ...	400	November, . .	278
June, ...	342	December, . .	206
			3,029

RAILROAD RECORD.

Pacific Railroad of Mo. — The section of this road between Franklin and Washington was opened for travel and transportation on the 10th of February, 1855. The first locomotive having passed over this part of the line on the 7th of said month.

At an election for Directors, held on the 26th ult., the following gentlemen were elected:

Robert M. Renick, James E. Yeatman, John C. Rust, N. B. Holden, of Johnson county, John How, Philip S. Lanham, James H. Lucas, Wayman Crow, Charles K. Dickson, Hudson E. Bridge, Robert K. Woods, Alfred Vinton, Wm. M. McPherson.

At a meeting of the Directors, on the 27th, Hudson E. Bridge was elected President; Alfred Vinton, Vice-President; and Samuel Copp, Secretary.

The Adventures of the Last Abencerage.

From the French of Chateaubriand.
BY THE JUNIOR EDITOR.

Continued from page 302, *vol.* 13.

The sun had descended below the horizon during the rambles of the two lovers. They had wandered through every part of the Alhambra. What souvenirs were awakened in the mind of Aben-Hamet! Here, the Sultana received the smoke of the perfumes which were burnt beneath. There, in that retired closet, she adorned herself with oriental robes. And it was Blanca, it was the idol of his heart, who recounted this story to the chivalric young man whom she adored.

The rising moon diffused its trembling radiance through the abandoned sanctuaries and deserted courts of the Alhambra. Her white rays traced on the flowery parterres and on the walls of the saloons, the lace-work of a fairy architecture, the arches of cloisters, the moving shadows of leaping waters, and of foliage gently swayed by the zephyr. The nightingale poured forth her touching note from a cypress tree that pierced the dome of a ruined mosque, and the echoes repeated the mournful strains. Aben-Hamet wrote, by the light of the moon, the name of Blanca on the marble of the hall of the Two Sisters: he traced the name in Arabic characters, so that the traveller might have one enigma more to solve in this palace of mysteries.

"Moor, these trifles are cruel," said Blanca; "let us quit this place. The destiny of my life is decided forever. Remember well these words: Mohammedan, I must love thee without hope; Christian, I am thy happy wife."

Aben-Hamet replied: "Christian, I must be thy despairing slave; Mohammedan, I am thy joyous husband."

And these noble lovers departed from this dangerous palace.

The passion of Blanca grew stronger every day, and that of Aben-Hamet increased with the same violence. He was so enchanted at the thought of being loved for himself alone, at the consciousness of requiring no other adventitious cause for the sentiments he inspired, that he would not reveal the secret of his birth to the daughter of the Duke of Santa Fe: he felt a delicate pleasure while indulging the idea that, on the same day when she would consent to give him her hand, he would inform her that he bore an illustrious name. But he was suddenly recalled to Tunis; his mother, attacked by a cureless disease, wished to embrace her son and to bless him before she died. Aben-Hamet presented himself at the palace of Blanca.

"Sultana," said he, "my mother is dying. She asks me to close her eyes. Wilt thou cherish thy love for me ?"

"Thou forsakest me," replied Blanca turning pale. "Shall I never see thee again ?"

"Come," said Aben-Hamet. "I wish to exact from thee, and to make to thee an oath which death only can break. Follow me."

They go out; they arrive at a cemetery which, many years ago, was the burial place of the Moors. Here and there were still seen the old tomb stones, on which the sculptor had originally carved the turban; but the Christians had displaced the turban by a cross. Aben-Hamet led Blanca to the foot of these monuments.

"Blanca," said he, "my forefathers rest here; I swear by their ashes to love thee, even until that day when the Angel of Judgment shall call me to the throne of Allah. I vow to thee that my heart shall never be engaged to any other woman, and that I will take thee for my wife so soon as thou wilt acknowledge the holy inspiration of the Prophet. At this time, each year, I will return to Grenada, to see if thou hast kept thy faith, and if thou wilt renounce thy errors."

"And I," said Blanca weeping, "I will await for thee every year, I will keep, even until my last sigh, the faith which I have sworn to thee; and I will receive thee as my husband, when the God of the Christians, more powerful than thy lover, shall have touched thy infidel heart."

Aben-Hamet departs; the winds waft him to the shores of Africa; his mother is just dying. He weeps over her, he embraces her corpse. Months flow along; sometimes wandering among the ruins of Carthage, sometimes resting on the tomb of St. Louis, the exiled Abencerage prayed for the day which would lead him back to Grenada. At last that day dawns: Aben-Hamet mounts his vessel, and turns the prow towards Malaga. With what transport, with what joy mingled with fear, he saw the first peaks of Spain! Does Blanca wait for him on those shores ? Does she still think of the poor Arab who ceased not adoring her under the palm-trees of the desert?

The daughter of the Duke of Santa Fe was not faithless to her vows. She had prayed her father to take her to Malaga. From the top of the mountains which bounded the inhabited coast, her eyes followed the distant vessels and the wandering sails. During the tempest, she looked with affright on the sea up-heaved by the

winds: she longed then to lose herself in the clouds, to expose herself in the dangerous straits, to feel herself bathed by the same waves, tossed by the same whirwind, which threatened the days of Aben-Hamet. When she saw the plaintive sea-gull touching the waves with his great curved wings, and flying towards the shores of Africa, she charged it with all these words of love, with all these raving vows, which flowed from a heart devoured by passion.

One day when wandering on the banks, she saw a long bark, whose lofty prow, whose leaning mast, and whose latin sail announced the elegant genius of the Moors. Blanca ran to the port, and soon saw the barbaric vessel enter, making the waves foam under the speed of its movement. A Moor, clothed with a rich dress, was standing on the prow. Behind him, two black slaves held the reins of an Arabian horse, whose smoking nostrils and flowing mane indicated at the same time his firey spirit, and the fright with which the noise of the waves inspired him. The bark arrives, lowers its sails, touches the pier, presents the side: the Moor leaps upon the shore, which echoes the sound of his arms. The slaves lead out the courser spotted like a leopard, which neighs and leaps for joy on finding land again. The other slaves gently carry a basket, in which a gazelle was resting couched among palmleaves. Its delicate legs were tied and folded underneath, lest they might be broken by the movements of the vessel: she wore a collar of aloe berries; and on a plate of gold—the clasp of the collar—were engraven, in Arabic, a name and a talisman.

Blanca recognized Aben-Hamet: she dared not betray herself to the eyes of the crowd; she retires, and sends Dorothea, one of her maids, to advise the Abencerage that she awaits him at the palace of the Moors. Aben-Hamet was then presenting to the Governor his firman, written in letters of azure on a costly parchment, and enclosed in a case of silk. Dorothea approaches and conducts the happy Abencerage to the feet of Blanca. What transports at finding each other again both faithful! What happiness at seeing each other again, after having been separated so long! What new vows to love each other forever!

The two black slaves led the Numidian horse which, in place of the saddle, had only the robe of a lion on his back, bound by a zone of purple. The gazelle was then brought out. "Sultana," said Aben-Hamet, "this is a deer of my country, almost as light as thyself." Blanca untied the charming animal, which seemed to

thank her, while casting on her the loveliest glances. During the absence of the Abencerage the daughter of the Duke of Santa Fe had studied Arabic: with liquid eyes she read her own name on the collar of the gazelle. Restored to liberty, it could hardly stand on its feet, so long had they been bound; laying itself down on the ground, it leaned its head on the knees of its mistress. Blanca gave it fresh dates, and fondled this deer of the desert, whose fine fur had retained the odor of the aloe-wood and of the rose of Tunis.

The Abencerage, the Duke of Santa Fe and his daughter together departed for Grenada. The days of the happy couple flowed along like those of the preceding year: the same walks, the same regrets at the sight of the country, the same love, or rather love always increasing, always shared; but also the same attachment to the religion of their fathers, distinguished the two lovers. "Become a Christian," said Blanca; "become a Mohammedan," said Aben-Hamet; and they parted once more, without having yielded to the passion which was drawing their hearts to beat in unison.

Aben-Hamet appeared again the third year, like those birds of passage in spring allured by love to our clime. He found not Blanca on the coast; but a letter from that adored being advised the faithful Arab of the departure of the Duke of Santa Fe for Madrid and of the arrival of Don Carlos at Grenada. Don Carlos was accompanied by a French prisoner, friend of the brother of Blanca. The Moor felt his heart shrink while reading this letter. He left Malaga for Grenada with the gloomiest forebodings. The mountains appeared to him as but a fearful solitude, and many a time he turned his head to look at the sea he had just crossed.

Blanca, during the absence of her father, could not leave a brother that she loved, a brother who wished to relinquish all his wealth in her favor, a brother that she had just again seen after seven years of absence. Don Carlos had all the courage and all the pride of his nation; terrible as the conquerors of the new world, among whom he first took up his arms; religious as the Spanish cavaliers, victorious over the Moors, he cherished in his heart against the infidels the hatred he had inherited from the Cid.

Thomas de Lautrec, of the illustrious house of Foix, where the beauty of the women and the bravery of the men pass as an hereditary gift, was younger brother of the Countess de Foix, and of the brave and unhappy Odet de Foix, Lord of Lautrec. At the age of eighteen years, Thomas was armed cavalier by Bayard, in

that retreat which cost the cavalier his life without fear and without reproach. Thomas was severely wounded and made prisoner at Pavie, while defending the gallant king who then lost everything *save honor.*

Don Carlos de Bivar, witness of the bravery of Lautrec, had taken care of the wounds of the young Frenchmen, and he soon formed between them one of those heroic friendships, of which esteem and virtue are the foundations. Francis I. had returned to France, but Charles V. retained the other prisoners. Lautrec had had the honor of sharing the captivity of his king, and of sleeping at his feet in prison. Remaining in Spain, after the departure of the monarch, he had been restored on his parole to Don Carlos, who had just brought him to Grenada.

When Aben-Hamet presented himself at the palace of Don Rodrigo, and was introduced in the hall where the daughter of the Duke of Santa Fe was engaged, he felt tortures unknown to him until then. At the feet of Donna Blanca was seated a young man who looked on her in silence with a species of rapture. That young man wore breeches of buff-skin, and a doublet of the same colour, bound by a girdle, from which hung a sword of the *fleur de lis.* A cloak of silk was thrown over his shoulders, and his head was covered by a hat with narrow brim, shaded with plumes. A bone-lace ruff, falling on his breast, disclosed his graceful neck. Two mustaches black as ebony gave to his face, naturally sweet, a manly and martial air. The large boots, whose tops were curled and folded over his feet, bore the spur of gold, sign of the chivalric order.

At some distance another cavalier was standing, leaning on the iron cross of his long sword: he was arrayed like the other cavalier, but appeared older. His air austere as well as ardent and passionate inspired both respect and fear. The red cross of Calatrava was embroidered on his doublet, with this motto: *For it and for my king.*

Blanca uttered an involuntary scream the moment she saw Aben Hamet. "Cavaliers," said she instantly, "behold the infidel of whom I have told you so much; think you that he cannot win victory. The Abencerages were formed like him, and no one ever surpassed them in loyalty, courage and galantry."

Don Carlos advanced towards Aben-Hamet. "Signor Moor," said he, "my father and my sister have told me your name; they

think you sprang from a brave and noble race; you, yourself are distinguished by your courtesy. Charles V., my master, intends soon to carry the war into Tunis, and we shall see each other again, I hope, on the field of honor."

Aben-Hamet laid his hand upon his breast, sat down without replying, and fixed his eyes on Blanca and on Lautrec. The latter admired with the curiosity of his country, the superb robe, the brilliant arms and the manly beauty of the Moor. Blanca appeared perfectly composed; all her soul was in her eyes: the sincere Spanish maiden did not try to conceal the secret of her heart. After a few moments of silence, Aben-Hamet arose, bowed before the daughter of Don Rodrigo, and retired. Astonished at the deportment of the Moor and at the looks of Blanca, Lautrec left with a suspicion which was soon changed into a certainty.

Don Carlos remained alone with his sister. "Blanca," said he to her, "explain yourself. Why has the sight of that stranger produced this confusion?"

"My brother," answered Blanca, "I love Aben-Hamet; and if he become a Christian, my hand is his."

"What," exclaimed Don Carlos, "you love Aben-Hamet! the daughter of the Bivars love a Moor, an infidel, an enemy whom we have driven from these palaces!"

"Don Carlos," replied Blanca, "I love Aben-Hamet; Aben Hamet loves me; for three years he renounced me rather than renounce the religion of his fathers. Nobility, honor, chivalry, are in him; till my last sigh I will adore him."

Don Carlos was capable of feeling all that was generous in the character of Aben-Hamet, although he deplored the delusion of that infidel. "Unfortunate Blanca," said he, "where will this love lead thee? I had hoped that Lautrec would have become my brother."

"Thou hast deceived thyself," replied Blanca; "I cannot love that stranger. As to my sentiments for Aben-Hamet, no one has a right to question them. Keep thy oaths of chivalry as I will keep my oaths of love. Know only, to console thyself, that Blanca never will be the wife of an infidel."

"Our family will then disappear from the earth!" exclaimed Don Carlos.

"To revive it is for thee," said Blanca. "Besides what signifies sons whom thou mayst never see, and who may degenerate from

thy virtue? Don Carlos, I feel that we are the last of our race; we pass away far from the common order, because our blood will flourish after us: the Cid was our ancestor, he will be our posterity." Blanca retired.

Don Carlos flew to the Abencerage. "Moor," said he to him, "renounce my sister, or accept the combat."

"Art thou charged by thy sister," answered Aben-Hamet, "to demand me to release her from the vows she made to me?"

"No," replied Don Carlos; "she loves thee more than ever."

"Ah! worthy brother of Blanca!" exclaimed Aben-Hamet, interrupting him; "all my happiness depends on thy blood. O fortunate Aben-Hamet! O happy day! I thought Blanca unfaithful, for that French cavalier * * *"

"And there is thy misfortune," exclaimed in turn Don Carlos, beside himself. "Lautrec is my friend; were it not for thee, he would be my brother. Tell me why you cause our house to be one of tears."

"I wish it well," replied Aben-Hamet; "but born of a race which perhaps has joined in battle with thine, I am however not a cavalier. I see no one here to confer upon me the order which would permit thee to measure thy sword with mine without descending from thy rank."

Don Carlos, struck by the reflection of the Moor, looked on him with mingled rage and admiration. Then suddenly he said: "I will make thee a cavalier, thou art worthy of the honor."

Aben-Hamet bent his knee before Don Carlos, who made him a knight, by striking him three times on his shoulder with the flat side of his sword; then Don Carlos girded him with the same sword which the Abencerage was perhaps about to plunge in his heart: such was the ancient order.

Both sprang on their horses, went out from the walls of Grenada, and flew to the Fountain of the Pine. The duels of the Moors and of the Christians had for a long time rendered that source celebrated. It was there that Malique Alabes fought with Ponce de Leon, and that the Grand Master of Calatrava had killed the valiant Abayados. The remains of the arms of that Moorish cavalier could still be seen hanging on the branches of the pine, and on the bark of the tree appeared letters of a mournful inscription. Don Carlos, pointing with his finger, showed the Abencerage the tomb

of Abayados: "Imitate," exclaimed he, "that brave infidel; and receive baptism and death by my hand."

"Death perhaps," replied Aben-Hamet: "but honor be to Allah and the Prophet!"

They quickly took the field, and rushed upon each other with fury. They had nothing but their swords. Aben-Hamet was less practised in combats than Don Carlos; but the goodness of his arms, tempered at Damascus, and the lightness of his Arabian horse, gave him an advantage over his enemy. He darted his steed like the Moors, and with his large cutting stirrup he struck the right leg of the horse of Don Carlos under the knee. The wounded horse fell down, and Don Carlos, dismounted by this happy hit, marched on Aben-Hamet with drawn sword. Aben-Hamet leaps to the ground, and receives Don Carlos with boldness. He parries the first blows of the Spaniard, who breaks his sword on the iron of Damascus. Deceived twice by fortune, Don Carlos sheds tears of rage, and exclaims to his enemy: "Strike, Moor, strike; Don Carlos disarmed defies thee, thee and all thy infidel race."

"Thou couldst kill me," replied the Abencerage, "but I have not thought to give thee the least wound: I have only wished to prove to thee that I was worthy of being thy brother, and to hinder thee from despising me."

At this instant a cloud of dust was rising: Lautrec and Blanca, sped on two racers of Fez lighter than the winds. They arrive at the Fountain of Pine, and see the combat suspended.

"I am conquered," said Don Carlos; "this cavalier has given me my life. Lautrec, you will be perhaps more happy than I."

"My wounds," said Lautrec with a noble and gracious voice, "permit me to decline the combat with this courteous cavalier. I do not wish," he added blushing, "to know the subject of your quarrel, and to penetrate a secret which perhaps will bring a death blow on my heart. Soon my absence will allow peace to reign among you, unless Blanca commands me to remain at her feet."

"Cavalier," said Blanca, "you will stay with my brother; you will look on me as your sister. All hearts here are filled with grief; you will learn from us to support the sorrows of life."

Blanca tried to induce the three cavaliers to shake hands with each other; all three refused: "I hate Aben-Hamet!" exclaimed Don Carlos. "I envy him," said Lautrec. "And I," said the

Abencerage, "I esteem Don Carlos, and I sympathize with Lautrec; but I will not love them."

"We always see," said Blanca, "that sooner or later friendship will follow esteem. May the sad event which brings us here, ever remain unknown in Grenada."

Aben-Hamet became from that moment a thousand times more dear to the daughter of the Duke of Santa Fe: bravery inflames love; the Abencerage now lacked nothing, as he was brave and Don Carlos owed him his life. Aben-Hamet, by the advice of Blanca, abstained, for many days, from presenting himself at the palace, so that the anger of Don Carlos might abate. Sweet and bitter thoughts mingling filled the soul of the Abencerage: if on the one side the assurance of being loved with so much fidelity and ardor was for him an inexhaustible source of delight, on the other side the certainty that he never could be happy without renouncing the religion of his fathers, oppressed the heart of Aben-Hamet. Already many years had rolled along without bringing any relief to his miseries: shall the whole life thus waste away?

He was plunged in a whirlpool of reflexions the most serious and the most tender, while one evening he heard the sound of that christian prayer which announces the end of day. He resolved to enter the temple of the God of Blanca, and to seek counsel of the master of nature.

(To be continued.)

ONE YEAR AGO.

BY EMILY P. LESDERNIER.

One year ago, the autumn winds were wailing,
But I was sheltered from their bleak assault;
One year ago, the harvest moon was sailing—
With tearless eyes I searched the starry vault.

I watched the moon, and heard the winds low chanting,
Listened for steps—upon the treshold stone,
But when *he* came, my heart with rapture panting,
Blessed heaven for him! I was no more alone.

The bare elm rattling at the window pane—
The dull owl hooting from her lonesome nest,
Like mournful omens clustering round the fane,
Where kept love, hope and joy their regal rest—

I heeded not,—rapt in a dream of bliss,
Prone on my bed of withered roses sleeping,
His voice was there—Nepenthe-like, his kiss
Soothed every sense, while love's glad gala keeping.

One year ago! Again the leaves are scattered—
Again the ghostly elm raps at the pane—
The owl more fiercely screams—her nest is shattered—
Beat by the stormy winds and drenching rain.

I listen now to nature's prophet teachings—
My poor soul's rifled of its richest lore—
The shimmering moonbeams, with their pale outreachings,
Bring me no promise, as they did of yore.

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ARTICLE I.

Social Aspects.—Love of Money.

So long as civil institutions are necessary to protect the rights of one individual against the aggressions of others, no form of government can be devised, no code of morals nor system of religion established which will not meet with active, unceasing opposition from conflicting elements. Opposition to the fundamental principles, progress and higher objects of human society assumes such an infinite variety of forms that even good men are often deceived by false lights, and drawn into error by the opinions and teachings of ignorant and disingenious pretenders.

Civil government—the established social order of a people—is rarely destroyed by the open, direct opposition of its constituents, nor does it necessarily follow that those who occasion the decay and downfall of States cherish a premeditated design against the institutions of their country. It is a want of regard for the elementary principles which give form and vitality to governments that paralizes their faculties, and renders them incapable of accomplishing the ends proposed by their founders. This is more especially the case in respect to republican governments, in which intelligence, moral refinement and the principles of equal justice are vital elements. In a word, republican institutions can only be established and permanently sustained upon a moral basis. The organic form may remain for a time, after the vital elements have decayed, but having lost its power to cherish and promote the higher objects of civilization, the government becomes a commodity of trade and speculation, to be transferred from party to party as an individual chattle. Hence, the moral condition of a people, rather than the administration of the government, claims the first and

highest degree of attention; and therefore the observation and study of the aspects presented by the changes which occur in the pursuits, opinions, and habits of a community should not be neglected by the patriotic citizen.

In view of the social aspects of the present times, we observe a strong tendency on the part of the people to place the civil and social institutions of the country upon a money instead of a moral basis. This is a natural development of the selfish principle which, springing up from the deep fountains of humanity, enters into every form of government, and though a necessary element, is nevertheless a dangerous antagonist to all civil and social institutions. The love of money is one of the prominent social aspects presented by the population of this country; and if, as we have been taught to believe, it is the root of all evil, surely no people ever had more cause to fear the consequences of a departure from the teachings of christianity. Indeed, even now, they are suffering in a variety of forms the penalties of their idolatry. Owing to an inordinate love of money, the successful individual finds neither contentment nor physical repose in the acquisition of wealth. His thirst for riches, his toil and anxieties, increase with his gains, and having "pierced himself through with many sorrows," he finds in his old age little ground to hope for a better state of existence.

The social relations—those perennial fountains of human happiness—are perverted by the love of money, and, assuming the character of mere business relations, are estimated as other commodities with a view to the profits that may be derived from them. And thus, the unfortunate money-lover cuts himself off from the sympathies of his species, becoming an alien in the land of his birth; a stranger to his brethren; a voluntary exile, self-doomed to toil for a self-grudging subsistence, and finally transmits the hoardings of a hard life to a thankless generation who scorn the man and the means by which he enriched them.

That feeling of exquisite enjoyment designed by the benevolent Creator as a reward for charitable deeds, is adulterated by the love of money, and the blessing which should attend the act of giving, is lost to the donor who is pained by the thought of parting with his means without certain assurance of a profitable investment. A stranger to the instant rewards of true charity, he is not the man to cast bread upon the waters, unless as bait concealing a strong hook to make sure its return.

We may not enter the connubial sanctuary where repose the treasures of the heart: the moral laboratory, where the affections are mingled and refined, where incense, rising from the one altar of many hearts in unison, ascends to heaven, an acceptable offering to the God of love. The mysteries of that sacred place are too holy to be exposed to public view. But, there is reason to believe that even there the love of money sometimes intrudes, distilling poison into the moral current at its very source, filling the connubial cup with gall and wormwood instead of nectar, and abundantly verifying the words of the sacred writer, that the love of money is the root of all evil.

As a natural consequence, these evils affect the public welfare in a degree corresponding with their influence upon the character and conduct of individuals. The love of money, combined with a prejudice against the labor involved in the ordinary pursuits of private life, constitutes the principal motive for seeking public employment. Hence, the public service is performed by hirelings, speculators, men looking after their own individual interests, and only performing so much service, and showing so much regard for the public interest, as is necessary to ensure the continuance of their employment. We do not affirm that this is true in respect to all men who seek public office in this country, so far from it, we are willing to admit that the picture we have drawn may be regarded as an exception to the reasonable presumption that men generally seek office with a view only to the public welfare. But we are persuaded that all intelligent, candid men will admit that the selfish principle has been rapidly gaining influence over the social for some years past, as well in the public councils of the country as in the private affairs of individuals.

The effects produced by the love of money upon the genius and talents of a people are also worthy of investigation. It is in accordance with general observation that the offspring of men who have spent their lives in the arduous pursuit of wealth, have rarely been equal to their parents in physical and mental endowments. This being true, does it not account, at least in some measure, for the lack of eminent statesmen at the present day? The men of the American revolution and their immediate descendants, were actuated by higher motives than a desire for wealth: they achieved the independence of the country, and devised and put in successful operation a more excellent system of government than any ever

before established by man. But as the resources of the country were developed, and the wealth of the people increased, the race of great men declined, and now, of the third generation, there is no individual known to the public who can justly claim to be more than equal to the second rate men of the generation immediately preceding. This, however, does not seem to be a subject of regret on the part of the people, for individuals possessing the higher qualities which constitute and adorn the statesman, have ceased to be in demand for the more important offices of the government. This very remarkable social phenomenon is doubtless produced by the operations of the selfish or money loving principle, impelling the people to make merchandize of their suffrages.

It has been well understood, for some years past, that distinguished merit is not an available quality, especially in the case of a candidate for the presidency. For those who aim to live by public employment, know that, should a president be elected on the ground of his own merit, they would have no special claim upon his patronage. Hence, they set up a man of straw, and create a president "in their own image," who being indebted to them for his elevation, is compelled to comply with their demands. Had not the solid, honest sense of the people been absorbed in the pursuit of money, we are persuaded such abuses would never have occurred. It is true, the great body of the people have had but little active agency in making nominations, but they are guilty of having endorsed them at the polls, thereby approving and confirming the cunning schemes of political speculators.

It would seem that the people entertain the opinion that it requires but little intelligence to give direction to the affairs of a republican government, and rely upon the virtue of written constitutions to preserve their liberty. But let them be assured that no opinion touching the institutions of this country, could be more fallacious or dangerous. It may be confidently affirmed that no other form of government devised by man, requires so much wisdom in its administration as a representative republic. For, unless the executive department be filled by men capable of comprehending the true nature of our institutions, possessing moral qualities so strong as to resist all manner of temptation, the legislative department will become licentious and sectional in its action, and produce continual discord in the Union.

A wise, just and firm administration gives tone to the other de-

partments of the government, cherishes a sense of national pride and patriotism in the hearts of the people, holds in check the restless and licentious spirits which are always ready for mischief, and is the best of all guarantees of peace with other nations.

The desire evinced by the people of this country to extend the boundaries of the nation, and the spirit moving them to acts of aggression upon the soil of neighboring powers, is another social aspect occasioned by the love of money. Men have become too eager for the acquisition of wealth to submit to the slow process of obtaining it by patient, honest industry; and in defiance of law, reckless of all consequences, desperately resolve to gratify their desire for gold by committing the highest crimes known to the laws of civilized nations, even at the imminent peril of their own lives. Who can contemplate these facts without feeling that his own person and property are in danger of aggressions from such lawless demons? Such men would doubtless plunder their own country, subvert its government, and butcher all who opposed them, were there a plausible prospect of success.

In view of these things, what shall we say of American civilization, its laws, morals and religion? Were our ancestors merely theorists, fighting and suffering to establish a government upon principles which their descendants have found to be inapplicable to the genius and wants of the nation, and impracticable as a social system? Were the great moral teachers of ancient and modern times but ignorant pretenders to a knowledge of man, his social relations and duties? Are the precepts of christianity fables without a moral, and its doctrines a hallucination? If not, then are the American people guilty of having wilfully departed from the paths illuminated by revelation and the wisdom of ages. Wilfully, because with all these lights before them, they have followed the instincts of their selfish nature, and abused their reason in justifying their conduct.

Yet, it must be admitted—and it is one of the social aspects of the times—that there is a manifestation of much zeal and vigilance in respect to a variety of topics relating to government, morals, and religion. But the fallacy consists in warring against imaginary evils; aiming at objects that cannot be obtained, or if attainable, are of no practical utility: placing the whole civil, moral and religious duties of man upon the observance or development of some one particular idea, and, figuratively, resorting to topical

applications to cure constitutional diseases. The instances are abundant, but one will serve to illustrate this part of our subject.

The people of some of the non-slaveholding States entertain the opinion that slavery is a great evil; and although possessing no right to meddle with it in the States where it exists, or demand that it shall be excluded from the territories, yet they wantonly persist in agitating the subject from year to year, mingling it with almost every question of State and national policy, engendering feelings of enmity between the two great sections of the country, even at the peril of dissolving the Union. We will not discuss in detail the probability of improving the condition of the African race in this country by releasing it from bondage: no enlightened philanthropist can conclude but that total emancipation would be a curse instead of a blessing to both races. We think we can trace the designs of a wise and benevolent Providence in sending a portion of the African race to our continent to be taught the science of civilization, embracing the precepts and doctrines of christianity, and finally to become the instruments of redeeming the land of their fathers from a state of brutal ignorance and the curse of barbarous superstitions. Owing to physical causes, civilization and christianity could never be established in Africa by the white races. Therefore, her children have been sent here for instruction. Were they freed from servitude, and thrown upon their own resources in our midst, they would fall again into the lowest depths of degradation; and to send them back in large numbers before they are qualified to perform the duties of free men in a civilized State, would defeat the objects of their mission hither. They must be taught; and it is but just that they render service for their tuition. It is, moreover, to their advantage that the area of slavery should be enlarged; for where their number is small compared to the white population, their condition and opportunities of improvement are better than when many are crowded together on large plantations in districts containing but few of our own race.

But all these things are overlooked by fanatics, who fancying that they have discovered a great evil, conclude they have been commissioned by the Almighty to redress it, without looking forward to the consequences. We leave it to the intelligent reader to make the comparison for himself between the fanatic and the filibuster. We trust the moral sense of the people will in good time be sufficiently aroused to exclude the influence of both from the

councils of the nation. Perhaps this may be a vain hope. But we cherish a strong confidence in the belief, that the conservative principle imbibed by the American people from the spirit of our institutions, though dormant, has not lost its vitality; and though contemned and sneered at by political tricksters, will yet come to the rescue, and retrieve the ground lost by its temporary supineness.

We appeal to the representatives of this principle, whether in government, morals or religion, and invoke them to awake from their dream of safety, to shake off their lethargy, and gird themselves for a vigorous, unremitting effort to vitalize their respective departments of our social institutions. Let the statesman discard all selfish views; and looking to the interests of the whole country, repudiate all sectional prejudices. Let him labor to comprehend the vital elements, the genius and objects of the government, and act with a view to the development of all the benefits which it is capable of imparting to the people. Let the teacher of ethics test the consequences of his doctrines by the christian standard and reject whatsoever leads to licentiousness and infidelity. Let the teacher of religion dignify his vocation by humility; and indulging less in speculative and controvertable doctrines, study and inculcate the social philosophy embraced in the precepts.

The principles of these institutions are, beyond all doubt, sufficient to reconcile the selfish and social natures of the individual, to harmonize the conflicting elements of society, to banish crime and every cause of inquietude from the earth, and restore man to his prestine condition.

The sure promise of these glorious results should kindle the latent spark of philanthropy in the heart of every individual, inspire him with an ardent desire for the regeneration of his species, impart energy to every faculty of his nature, and impel him onward to the discharge of every social, moral and religious duty.

Article II.

Valley of the Ohio.

BY MANN BUTLER, ESQ.

Continued from page 331, vol. XIII. No. 5.

Occupations of the people; First roads; The frontier settler; The cabin; The fort; Mode of alarming the settlers on an Indian invasion; The furniture of a frontier cabin; The cradle of the frontier, The table furniture; Surprising contrast of frontier with more civilized customs; Diet, Dress of the frontier; Deerskins and paper currency of the frontier.

The opportunity now seems favorable to notice the spirit and manners of society in these primitive times of western history. Until nearly this time, the proportion of females had been small, painfully so, to the gallantry and devotion of the males; it was now, about 1781, no longer felt. A large migration of young unmarried females took place, and a license to marry is said to have been the first process issued by the clerks of the new counties; "*there was not a lawsuit known to exist at that time in the country;*"* since so loaded with litigation about the very homes and firesides of her citizens.

Our first settlers were necessarily composed in general of those who had braved and enjoyed the perils and enterprise of settling the frontier of the adjacent States. Few others could support the hardships, or would encounter the perils and difficulties which environed a residence in these *dark and bloody grounds.*† The duties of the household in the happy absence, at that time, of slaves, (would to God that all the West could have escaped the curse and iniquity of their condition,) were discharged by the white females. They milked the cows, prepared the meats, spun and wove the garments of their husbands and children; while the men cleared the land, prepared it for the future crops, and hunted the woods for game.

To grind the Indian corn or maize into meal on the rude and laborious handmill; or to pound it to hommony in a large wooden mortar, was occasionally the work of either sex. The defence of the country, the building forts and cabins fell most properly to the men. Yet it was not uncommon in these heroic times, during a siege by the Indians, for the women to cast bullets and *neck* them in order to fit them for the rifle. Deerskins were extensively used for dress, to compose the huntingshirt, the long overalls, the leggins, or the soft and pliable moccasons. The bear and the buffalo

* Idem.

† The term Kantuckee, or Kentucky, is said to have this meaning in the language of the Indians. The author, however, has been unable to confirm this popular etymology by the inquiries he has made of those conversant with the language of the natives. The Kentucky river is called Cuttawa by Lewis Evans, in his map of the Middle Colonies, published at Philadelphia in 1755. It is called Kentucke, or Cuttawa, in the treaty of Greenville, in 1795.

It means "meadows" or "among the Meadows in the Language of the Iroquois tribe

furnished the principal covering for the bed. Handkerchiefs tied round the head often supplied the place of hats; strips of buffalo hide were used for ropes.

Stores and shops were unknown for a long time after the settlement of the country; wooden vessels, prepared by the turner, the cooper, or their rude representatives in the woods, were common substitutes for table furniture. "*A tin cup was an article of delicate luxury, almost as rare as an iron fork.*"* Every hunter carried a knife, too aptly called a *scalping knife*, in the hands of the white man, as much as in those of the Indian. One or two knives composed the cutlery for families, never *deficient in children*. The furniture of the cabin was appropriate to the habitation.

But on a subject so interesting as ancient manners in any condition of society, and particularly that of our own frontier ancestors, it may be permitted to enlarge a little more.

To the fearless and persevering efforts of the enterprising pioneers of the west we owe the conquest of this noble portion of the United States from the dominion of the fierciest and most warlike tribes of North America. The portrait of their manners is rapidly fading away, and the author feels an irresistible derire to retouch the lineaments of so interesting a picture for the admiration, may he not say for the emulation of posterity, in many noble, generous and gallant qualities.

There are no subjects on which the curiosity of distant generations delights to dwell more, than on the representations of the manners of different people and differing states of society. They form the very essence and living spirit of history, presenting a key to the transactions it records in every change they undergo. Such delineations constitute an essential portion of the history of human nature; at all times a study engaging to the least inquisitive. What intense gratification would be felt throughout the literary world, should any manuscript be disinterred from the sleep of centuries, which revealed the lives and manners of the ancient Greeks and Romans, those idols of European scholars! What ingenious pains have been exerted to disinter and to decipher the indications of such facts in the ruins of Herculaneum and Pompeii? What gives such powerful interest to "The Last Days of Pompeii" but its weaving together into one web the habits and practices of the ancient Romans scattered in fragments over the surface of classical learning,—one graphic and life-like narrative of habits and facts often eluding the searching eye of the antiquary! Can our posterity, if the term is not one of too distant existence, be incurious about the manners and spirit which animated the pioneers and founders of western society?

* Idem.

The author will then enter into this decription assisted by the best lights he has been able to gather on this obscure and neglected portion of social history. He will arrange these materials under several heads indicative of the most interesting phases of society.

1. Early Roads in the West, and the First Road in the western country.

The first thing which strikes the notice in a country yet unsubdued by the hand of civilization is, the utter absence of roads. Paths and traces or trails constantly requiring the aid of the axe to enlarge them, are the only approaches to a country in such a condition, unless a friendly river offers its bosom to transport the curious explorer or bold warrior.

In the more fertile regions of the west, particularly where the cane or the salt licks abounded, the deer and the buflalo, by their constant passage in pursuit of this luscious herbage and delicious condiment, opened roads, which were often by the hunters called *streets*. These *buffalo roads* as they were termed, formed most useful avenues by which to penetrate the country. In the luxuriant canebrakes of the west, the growth of the cane was so tall and springy, as often to lift both horse and rider off the ground, in passing over the strong elastic stalks.

The first artificial road which the author has been able to obtain any account of, is the one made by order of the old Ohio company, about 1750.* Captain Thomas Cresap, the father of Michael Cresap, immortalized by the erroneous imputations of Mr. Jefferson, was employed for this purpose. An Indian, by the name of Namacolin, is said to have been the pilot of a route so disastrous to his race.† It corresponded to the route afterwards pursued by Gen. Braddock, and nearly conformable to the present national road. This is no feeble confirmation of the judgment of native engineers in the woods.

The next road in the west was one authorized by the Legislature of Virginia, in 1766, to the cut from "the North Branch of Potomac river to Fort Pitt, on the Ohio, by or near the route called Braddock's road."‡

In 1772, so feeble still was western population, that the government of Virginia had to lend its aid towards opening a road from the Warm Springs to Jenning's Gap. At the session of 1779,‖ another great road was authorised to be made from the settlements east of the Cumberland mountains to the open country of the *County of Kentucky*. But these roads were, with the exception of the first, accommodations to a pre-existent population, and not the first means of approaching the country. The Cumberland Gap

* Sparks.

† Jacob's Life of Cresap, 27.

‡ Henning, VIII, 246, 252.

‖ Idem, IX, 143.

in the south-east and the Ohio river on the north-west, were the principal approaches to the West.

THE SETTLER.—It was along these narrow and obstructed routes which had been passed by the hunter, or the Indian warrior, that the pioneer travelled, and often with his family; their scanty stock of furniture packed on the back of a horse well called a packhorse. Pursuing his route in this primitive style, the pioneer would encamp upon the line of his direction, until his critical fancy might be pleased with some spot on which to rest for a season of cropping and hunting. Here the wanderer and his companions, if he had any, which was not always deemed necessary, except in a time of Indian war, would make a clearing — that is, would cut down or girdle the trees, at least sufficiently to *make* as well as to place his log cabin.

THE CABIN. — This was composed of the trunks of trees bared of their branches, notched at the ends, and fitted upon one another, in a quadrangular shape to the desired height. Openings cut through the logs left room for doors and shutters. A capacious opening, nearly the whole width of the cabin, made the fireplace. By this ample width, economy of labor in cutting lengths of firewood, as well as comfort in houses not too close, were both consulted. If, however, there were any danger apprehended from Indians, then the cabin walls of different families composed one or more sides, of what was called a fort, or blockhouse, which served the double purpose of family residence and military defence.

THE FORT.—The walls on the outside were ten or twelve feet high, with a roof sloping inwards. A very few of those cabins had puncheon floors;* the greater part had earthen floors. Where the cabins did not extend, pickets were firmly set into the earth, to complete the fortification. In all this work not a nail nor a spike of iron was used, for "such things were not to be had." "Block houses were built at the angles of the fort, cabins and the stockade. Their upper stories were about eighteen inches every way longer in dimension, than the under story, leaving an opening at the commencement of the second story, to prevent an enemy from making a lodgment under their walls. In some forts, instead of block houses, the angles of the fort were finished with bastions, or projecting bulwarks. A large folding gate, made of thick slabs nearest the spring, closed the fort. The stockades, bastions, cabins and blockhouses, were furnished with port holes at proper heights and distances. The whole of the outside was made bullet proof."

Still the attachment of the people to their separate cabins on their farms was so great, the privacy, the room, in fine, all the comforts of home were so preferable there to the crowded, cramped and noisome fort, that the people seldom moved into the forts,

* A thick sort of slabs or flat and split, not sawed logs.

until the spring, or until some *murder* committed by the Indians showed too plainly there was no longer safety out of them.

When this was found to be the case, the terrors of the people, and the precautions used to guard against their enemies on these occasions, may be well judged from the following natural account given by an actor in these early scenes of western danger and privation. "I remember that, when a little boy,* the family were sometimes waked up in the dead night by an express with a report that the Indians were at hand. The express came softly to the door, or back window, and by gentle tapping waked the family. This was easily done, as habitual fear made us ever watchful and sensible to the slightest alarm. The whole family were instantly in motion. My father seized his gun and other implements of war. My stepmother waked up and dressed the children as well as she could; and being myself the eldest of the children, I had to take my share of the burthens to be carried to the fort. There was no possibility of getting a horse in the night to aid us in removing to the fort. Besides the little children, we caught up what articles of provision and clothing we could get hold of in the dark; for we dared not light a candle, or stir the fire. All was done with the utmost despatch and the silence of death. The greatest care was taken not to awaken the youngest child. To the rest it was sufficient to say *Indian*, and not a whimper was heard afterwards. Thus it often happened that the whole number of families belonging to a fort who, in the evening were at there homes, were all in their little fortress before the dawn of the morning. In the course of the succeeding day, their furniture was brought in by parties of armed men."

The Furniture of the Cabin. — Let us now look into the interior of the primitive cabins, to which their owners were so much attached, amid such appalling dangers. The furniture was appropriate to the habitation, the table was composed of a slab roughly hewn with an axe, and stood on legs prepared in the same manner. This latter instrument was the principal tool in all mechanical operations, and with the adze, the auger, and above all, the *rifle* composed the richest mechanical assortment of the frontier. Stools of the same material and manufacture as those of the table, filled the place of chairs.

When some one more curiously nice than his neighbors, chose to elevate his bed above the floor, (often an earthen one,) it was placed on slabs laid across poles, which were again supported by forks *driven* into the *floor*. If, however, the floor happened to be so luxurious, as to be made of puncheons, the bedstead became

* Doctor Joseph Doddridge, of western Virginia, brother to the late Philip Doddridge, of great public and professional eminence. The *Notes* of the former are the treasury of which such free use is made in this account of frontier manners, pp. 116, 118.

of hewed pieces let into the *sides* of the cabin by anger holes in the logs.

Nor ought the cradle of these times to be omitted; it was a small rolling trough, much like what is called a sugar trough, which is used to receive the sap of the sugar-maple tree, when tapped to discharge it.* "The table furniture for many years after the settlement of the country, consisted of a few pewter dishes and plated spoons; but more generally of wooden bowls, trenchers and noggins. When these were scarce, gourds and hard shelled squashes made up the deficiency. The iron pots, knives and forks were brought from the east side of the mountains along with the salt and iron on pack horses.†

These luxuries could only be acquired, however, where the new settlements were in some degree contiguous to the older ones. In the remoter West, nature supplied the people with salt from the springs of salt water, scattered by Divine Providence over the whole western country.

It is amusing to record that the first introduction of delf-ware was considered by some of the old settlers as a *culpable* innovation — some of the "wasteful ways," as Leatherstockings would have said. This ware was too easily broken, and what was a much more weighty objection, it *dulled* the edge of the knives.

How forcibly the contrast of this simple furniture with that of a country more advanced in the arts, must have struck the least observant. An illustration of this remark is related by Dr. Doddridge, already so freely quoted in the same graphic sketches, which principally form the sources of this account.

This gentleman, when not more than seven years old, was sent into Maryland to a relative there, in order to go to school. On his journey he says: "At Col. Brown's in the mountains at Stoney Creek glades, I for the *first* time saw tame geese; and by bantering a pet gander, I got a severe biting by his bill and beating with his wings. I wondered very much that birds so large and strong should be so much tamer than the wild turkies. At this place, however, all was right except the geese. The cabin and the furniture were such as I had been accustomed to see in the backwoods, as my country (north-western Virginia) was called. At Bedford, Pa., everything was changed. The tavern at which my uncle put up was a stonehouse; and to make the change still more complete, it was plastered on the inside, both as to the walls and ceilings. On going into the dining room, I was struck with astonishment at the appearance of the house. I had no idea that there was any house in the world that was not built of logs; but here I looked

* The writer recollects a distinguished public character of Kentucky, the late Chief Justice Logan, boasting before the people, in a canvas for the governorship of the State, that "he had been born in a station, and rocked in a sugar-trough."

† Idem.

round the house, and could see no logs, and above all, I could see no joints; whether such a thing had been made by the hands of man, or had grown so of itself, I could not conjecture. I had not the courage to inquire anything about it.

When supper came in, my "confusion was worse confounded." A little cup stood in a bigger one, with some brownish looking stuff, which was neither milk, hommony nor broth; what to do with these little cups and the little spoon belonging to them, I could not tell; and I was afraid to ask anything concerning the use of them. It was in the time of the war (Revolutionary), and the company were giving accounts of catching, whipping and hanging the tories, The word jail frequently occurred; this word I never heard before; but I soon discovered its meaning, and was very much terrified at it, and supposed that we were in much danger of the fate of the tories; for I thought, as we had come from the backwoods, it was altogether likely that we must be tories too. For fear of being discovered, I dared not utter a single word. I therefore watched attentively what the folks would do with their little cups and spoons. I imitated them, and found the taste of the coffee nauseously beyond anything I ever had tasted in my life. I continued to drink as the rest of the company did, with tears streaming from my eyes; but when it was to end, I was at a loss to know, as the little cups were filled immediately after being emptied. This circumstance distressed me very much, as I dared not say I had enough. Looking attentively at the grown persons, I saw one man turn his little cup up and put his spoon across it. I observed after this, his cup was not filled again; I followed his example, and to my great satisfaction, the result as to my cup was the same."*

Nor ought this account by a most veritable author, to subject him to the slightest suspicion of exaggeration, when the houses, the furniture and the diet, by which he had been constantly surrounded from early youth, are remembered.

Diet. — "Hog and hommony" constituted a dish of proverbial celebrity, when that animal had sufficiently increased in numbers. Johny cake,† or pone, was at the outset of the settlement of the country,‡ the only form of bread in use for breakfast and dinner. At supper, milk and mush were the standard dish. When milk was not plentiful, which was often the case, owing to the scarcity or the want of a proper pasture for cows, the substantial dish of hommony had to supply the want of it; mush was often eaten with sweetened water, molasses, bears' oil, or the gravy of fried meat. Every family, besides a little garden for the few vegetables which they

* Idem.

† Sometimes written *Journey* cake, perhaps from the rapidity with which it is cooked or toasted before the fire in time for a speedy journey.

‡ Northwestern Virginia.

cultivated, had another small enclosure containing from half to an acre, which they called a trock patch, in which they raised corn for roasting ears, pumpkins, squashes, beans and potatoes. These, in the latter part of the summer and fall, were cooked with their pork, venison and bear meat for dinner, and made very wholesome and well-tasted dishes."*

"Tea and coffee were only slops," which came into use in later times; and were said in the adage of the day "not to stick by the ribs." The idea was that they were designed only for people of quality, who did not labor, or the sick. A genuine backwoodsman would have thought himself disgraced by showing a fondness for slops. Indeed, many of them have to this day (1824,) but little respect for them."†

Dress.—From the meats and food of our pioneers we will pass to their dress. The hunting shirt, which so much delighted Col. Bouquet‡ when he saw it on Col. Washington's men, in the French war of 1756, was universally worn. "It was a kind of loose frock reaching half way down the thighs, with large sleeves open before, and so wide as to lap over a foot or more when belted. The cape was large, and sometimes handsomely fringed with a raveled piece of cloth of another color from that of the hunting shirt itself. The bosom of this dress served as a wallet, to hold a chunk of bread, cakes, tow for wiping the barrel of the rifle, or any other necessary for the hunter or the warrior. In cold weather, the mittens, and sometimes the bullet bag occupied the front part of it. To the right side was suspended the tomahawk, and to the left the scalping-knife, in its leathern sheath. The hunting shirt was generally made of linsey; sometimes of coarse linen; and a few of dressed deer skins. These last were very cold and uncomfortable in wet weather. The shirt and jacket were of the common fashion. A pair of drawers on breeches and leggins were the dress for the thighs and legs; a pair of moccasons answered for the feet better than shoes.

The former were made of dressed deerskin, and mostly of a single piece, with a gathering seam along the top of the foot, and another from the bottom of the heel without gathers as high as the ankle joint, or a little higher. These were nicely adapted to the ankles and lower part of the leg by strings of deerskin, so that no dirt, gravel or snow could get within the moccasons. The moccason in ordinary use cost but a few hours' labor to make them. This was done by an instrument denominated a moccason awl, which was made of the back spring of an old clasp knife. This awl with its buck horn handle was an appendage to every shot-pouch, together with a roll of buckskin for mending the moccasons.

* Idem.

† Idem.

‡ Sparks, II, 294.

This was the labor of almost every evening. They were sewed together, and patched with deerskin thongs, or whangs, as they were commonly called. In cold weather the moccasons were well stuffed with deers' hair or dry leaves, so as to keep the feet warm and comfortable; but in wet weather, it was usually said, that wearing them was "a decent way of going barefoot;" and such was the fact, owing to the spongy texture of the leather of which they were made."*

This particulars and details respecting a dress still familiar in the frontiers of the U. S., may at first seem unnecessary; but they are fast passing out of memory on what has once been the frontier, even to the margin of the Atlantic: and the author thinks that this record of a curious and intelligent pioneer may well be preserved for the gratification of future generations.

"Owing to this defective covering of the feet, more than to any other circumstance, the greater number of our hunters and warriors was afflicted with rheumatism in their limbs. Of this disease they were always apprehensive, in cold or wet weather; and they therefore always slept with their feet to the fire, to prevent or cure it, as well as they could. This practice fortunately had a very salutary effect, and prevented many of them from becoming cripples in early life.

In the latter part of the Indian war, young men became more enamoured of the Indian dress throughout, with the exception of the blanket. The drawers were laid aside, and the leggins were made longer, so as to reach the upper part of the thigh. The Indian breech clout was adopted. This was a piece of linen or cloth near a yard long and eight or nine inches broad. This passed under the belt before and behind, leaving the ends for flaps hanging before and behind over the belt. These flaps were sometimes ornamented with some coarse kind of embroidery work; to the same belts which secured the breech clout, strings were attached to support the long leggins; when this belt, as was often the case, passed over the hunting shirt to the front, the upper part of the thighs and of the hips was naked. The young warrior, instead of being ashamed at this nudity, was proud of his Indian-like dress. In some few instances, I have seen them go into places of public worship in this dress. Their appearance did not add much to the devotion of the young ladies.

The linsey petticoat and bed gown were the universal dress of our women in early times. They went barefoot in warm weather, and in cold their feet were covered with moccasons, coarse shoes, or short socks. The coats and bed gowns of the women, as well as the hunting shirts of the men, were hung in *full display* on wooden pegs round the walls of their cabins, so that while they answered, in some degree, the place of paperhangings or tapestry,

* Idem.

they announced to the visitors their wealth or poverty in the articles of clothing."

Nor was the female sex exempt from the labors of the times; "they had to handle the distaff or shuttle, the sickle or the weeding hoe, contented if they could obtain their linsey clothing and cover their heads with a sun bonnet made of six or seven hundred linen."

ARTICLE III.

Address

DELIVERED BEFORE THE IOWA STATE AGRICULTURAL ASSOCIATION, HELD AT FAIRFIELD, IOWA, IN OCTOBER, 1845.

By GEO. C. DIXON, Esq., of Keokuk, Iowa.*

Fellow Citizens of Iowa:

I rise in your midst to address the first State Agricultural Association ever convened in a free State on the west of the Mississippi river. The event is one of interest and magnitude. It will form an era in our history. I appreciate it; and feel, I trust, the responsibility of the part I am called upon to act, in the exercises of this day.

I know my unfitness and want of preparation, for an appropriate and acceptable performance of the task assigned me; but I am here by your invitation — extended to me under circumstances which touched the finest feelings of my nature, and forbade refusal.

It is true, that, in the art of husbandry, my observation and experience are limited, yet it has aspects and relations, not unfamiliar to my studies or foreign from my pursuits. My earliest labors were connected with it; and it is linked with some of my pleasantest memories and most cherished associations.

In casting my eye around, I behold an immense concourse of people—gathered together from every section of the State—moved by some common influence—assembled for some common purpose, and acting with an effective energy and unaccustomed harmony. Why, and wherefore is this? No political contests now agitate and distract us: The blast of the war bugle—the roar of artillery—the shock of hostile forces, are neither of them heard throughout the Republic: No national requisition summons us here to council; and yet, we witness the congregation of multitudes — composing the

The great ability and good taste with which the author of the following address has treated Agriculture and its relations to other pursuits, throw a charm around the subject which cannot fail, we think, to please all who delight in the productions of true genius. The address occupies a large space in the present number of our Journal, but in view of the importance of the subject, and the excellent manner in which it is treated, we are persuaded that few of our readers will think it too long.—SEN. ED.

strength and sinew—the hope and glory of our Country. Grace, and beauty too, lend their attractions to the scene—robe it in its loveliest aspects and most brilliant coloring, and soften and sweeten the enjoyments growing out of this genial interchange of fellowship and good feeling. Why, and wherefore, I inquire, is this? The answer is brief, and embraced in one word—and that one word is IMPROVEMENT—improvement in the things that live and breathe, and grow around you, in your houses and in your homes—of the head and of the heart—improvement in the character of rural labor, in order to invest it with more of excellence, effectiveness and intelligence —to raise up agriculture to the dignity of an useful art —endow it with more of science and practical philosophy, and establish it in its merited position as a substantive and controlling element in the department of national wealth and industry — improvement in all the relations you sustain towards family, society, country and God.

This vast assemblage, whose mighty bosom is glowing with animation and hope, reveals the inspiring fact that such is your desire and purpose. And your object is, indeed, one of transcendent concern to every industrial interest of the State. Let it be my duty and esteemed privilege, at this time, to present you with my humble tribute in recognition of its magnitude, and in aid of its accomplishment.

It is knowledge, then, that you desire and must have—knowledge whether theoretic or practical—scientific or experimental, which pertains to your pursuits and the exalted purpose which has called you together.

Let me *inaugurate this purpose* in the announcement of some elemental truths—suggested by the occasion — entering into the very heart of your pursuits, and designed to impress upon you, your true position and responsibility. Their consideration, will elevate and enlarge your thoughts, and bind you closer to the invigorating and healthful exercises of country life:

And 1st—The culture of the soil, is not only the primitive calling of man, but it lies at the very bottom of the fabric of the useful arts and social advancement. Out of this, springs the massive column that sustains this fabric and gives it vitality, compactness and solidity. It reposes at its base, and establishes its foundations. "Man," says Webster, "may be civilized in some degree, without great progress in manufactures and with little commerce with his distant neighbors. But without the cultivation of the earth, he is, in all countries, a savage. Until he gives up the chase, and fixes himself in some place and seeks a living from the earth, he is a roaming barbarian. When tillage begins, other arts follow. The farmers, therefore, are the founders of human civilization."

Again—The pursuits of agriculture require extensive and varied knowledge, especially in the range of the physical sciences and the mechanic and experimental arts.

Knowledge of every grade and character, is power—that is, it confers power—actual power—moral, physical and political power. It lays open many of the secrets of nature. It elevates, energizes and developes whatever it touches. It strengthens the arm, enlarges the muscle and broadens the chest, so far as the agency and results of all physical toil are concerned. It brings the laws of mechanics under contribution to every industrial pursuit. It teaches the principles of organization, development and increased production. It unites the mind with the hand of labor and relieves it. Its influence is felt in every calling of life, and in every exertion of human power.

And this observation, is equally true, of knowledge pertaining to the varied pursuits of the farm, as of knowledge pertaining to any other department of science or experimental philosophy. Indeed it is more so. Knowledge is peculiarly and specially applicable to the enlightened understanding, of all the various employments of the field. Without it, there can be no successful husbandry—no intelligent appreciation of its intimate connections with science—no comprehension of its rationale and philosophy.

Agriculture, as an employment, has to do with the principles and elements of nature. It is linked inseparably with the laws and processes of vegetable generation, nutrition and production. Its operations are performed by their agencies. There can be no life, no expansion, no production without them. The farmer may sow and plant, but he cannot gather or reap unless the laws of the vegetable and animal kingdom continue to exert their silent, yet ceaseless and vitalizing influence. There must be the succession of day and night—the sunshine and the shower—the lightening and the storm, else there will be no fruits to ripen, no harvest to gather. It is thus, we discover the close companionship existing between the husbandman and nature. She works continually side by side with him—laying open the rich treasures of the earth—aiding him in his toilsome effort, and leading him on to competence, health and happiness. She is his faithful friend and handmaiden throughout all the revolving seasons. She gives him the earth and the air—the sky and the rain from out of her abundant stores to advance his labors, enrich his fields and ripen his harvest. She woos him to a knowledge of herself and her laws. She invites him to a participation of her wealth and her gifts. There is no fickleness in her disposition—no deception in her promises. Her principles are immutable, ceaseless and constant in their operation, and exerting their energy with mathematical precision. We will find no change or aberration here—no misjointed machinery—no eccentric action. The hand and intelligence of the great Architect upholdeth and moveth and guideth all. Everything is as rigid as demonstration and inflexible as destiny.

If then you desire to avail yourselves of these potent auxiliaries, and without whose constant instrumentality all your labors are fruit-

less, you must obey them, conform to them and act in fellowship with them. Between you and them, there must be harmony and co-operation. This would appear to be, a self evident proposition requiring neither argument nor illustration. It lies at the very foundation of your success in life. This fellowship evolves a vital principle of action that addresses itself to the understanding and good sense of every person interested in the cultivation of the soil. There is no room for any diversity of sentiment on this subject.

To obey these laws—to avail yourselves of them—to become intelligent and prosperous farmers—you must understand them, their power, relations, conditions and vicissitudes; and this, involves enlarged knowledge, accurate and extensive science, wide and various observation and experiment. The composition of the soil and of the atmosphere — the influence of light and heat on vegetation— the structure of plants — the laws of their growth — the elements they absorb and evolve — indeed, the entire system of animal and vegetable physiology—must all be studied and clearly apprehended if you intend, and really wish to stamp the labors of the farm with the impress of science, and make it stand out in the field of industry as deserving the attention of educated and enlightened mind.

If your labors do not harmonize with these laws of nature — if there is not reciprocity of action and influence between you and them—if they remain as secrets locked up from your view — it is manifest you must labor at great disadvantage, and forever prove the loser. To depend upon accident for harmony, and unreasoning experience for a knowledge of these relations, is ignominiously to surrender your intelligent faculties, silence the voice of wisdom and refuse the proffered aids of science in matters affecting your dearest interests and most vital business relations.

But this is not all. More is required. You should not only *know results*, but you should know the causes and processes—the reason and philosophy of your pursuits in all their relationships to mind and matter, society and government. These should be clearly and accurately understood. Observation will not do. Experience alone is not sufficient. These do not constitute *knowledge*. Effects should be traced to their causes, and *their* relations recognized. The mind should be made to grapple with, and fathom the whole process and operation. Your reason and judgment should test and determine the true uses and value of every theory in its application to agriculture. Experiments upon the farm, should be cautiously made and conducted. Nature should be imitated, and, as Lord Bacon says, "it were good, therefore, that men in their innovations would follow the example of time itself, which indeed innovateth greatly; but quietly, and by degrees scarce to be perceived." So let it be with the introduction of scientific speculations—be cautious and circumspect. The labor of nature is supposed to be equal to one half of the labor of man bestowed upon agricultural production, so far as it relates to value; and if this is true, the tiller of the soil

ought to contemplate the Great Spirit who ruleth on high with unaffected reverence and gratitude. Cultivate then, my friends, a spirit of enlightened inquiry into the principles and agencies entering into rural labors and production, and avail yourselves of those results sanctioned by science and experience.

Again—In these United States, agriculture gives employment to a larger amount of capital and labor, than all other industrial pursuits combined. There was, in 1850, and in our country, three thousand four hundred and twenty millions of dollars invested in farms and farming implements and machinery alone—independent of the value of stock and production, and there are now five millions of persons engaged in agricultural pursuits.

This capital must be protected—and its most effectual protection will be found in the labor it employs and remunerates. To elevate this labor and render it respectable, it must be educated and made intelligent. It constitutes the immediate, efficient instrument in all the operations and productions of the farm: and it is the dictate of wisdom and the duty of society and government to encourage it —to enlarge its sphere of action—to place science at its disposal and render it more productive and available. It should be made to understand itself, its office, its purpose, its position and its real relations, capabilities and power in the vast fabric of human industry and exhaustive energy. Its whole greatness should be made known—its whole majesty unfolded. To accomplish this, the science of the school must not be separated from the labor of the country—the beautiful in art must be brought into companionship with the useful in life, and the head and the heart must unite with the arm and the muscle in all their active agencies and complex modes of operation.

In ancient days, and during the feudal ages, all labor, and especially rural labor, was placed at the very bottom of the social system—degraded in character — uninstructed in knowledge, and oppressed by every aggression of tyranny; but, when the feudal system, rocking to its base, was overwhelmed by the shock of revolution and political convulsion, and scattered its castellated fragments like a stupendous wreck over the face of Europe—agriculture became partially conscious of its own power — shook off many of the shackles that bound it down, and commenced its onward march in the progress of man's development and civilization. Since that period, this great industrial interest has been constantly advancing in political power, character and general intelligence. Far more of science and knowledge now pertain to its pursuits and greater respectability has been, and is now accorded to those employed in it.

But much, very much remains to be performed. The time has arrived when the farmer must be educated for his cal ing. The age in which we live and the circumstances surrounding us, demand that educated mind should become more closely connected with rural pursuits. Apprenticeship, or preparation of some character,

must be adopted as a necessity to successful agriculture. Intelligence and energy, must characterize every one of its departments and all its operations. There is no mistaking the admonitions of the present and the indications of the future on this polnt. And why should not the husbandman be prepared for his manifold duties as well and as thoroughly as the lawyer, the minister and the physician? Surely, no sufficient reason exists. His occupations are equally important — equally reputable, and are equally benefitted by the lights and influences of mechanical and experimental knowledge.

The farm must have better organized and more concentrated labor — more work bestowed upon an equal number of acres — a higher and more scientific order of cultnre. Such will certainly be the result whenever our young men destined for the farm shall receive an education designed to teach them the economical use and most efficient application of their physical energies to the cultivation of the soil. When such shall be the case, you will be astonished how the laws of nature, the principles of mechanics, the results of science—the teachings of chemistry and the whole range of experimental philosophy will come to the farmers aid and relieve him in his laborious efforts.

The agriculture of the country, then, evidently demands more practical science to be interwoven with its pursuits — more useful knowledge, and a better instructed grade of labor to accompany its operations.

To effect this purpose, agriculture, as one of the most useful arts, as intimately allied with the laws and workings of nature, and as essential to the cause of human progress and civilization—must be baptized into the practical science and philosophy of the age—endowed with the energies of a high intelligence — pervaded with the spirit, and softened and beautified by the influences of literature and taste, in order to confer upon it that rank and advancement in the *circle* of human pursuits which its real importance and value so preeminently merit and must ultimately acquire.

And, my friends, if the employments of all those who till the soil and reap its harvests, could be thoroughly invested with the faculties and influences of a solid and enlightened agricultural education — if they could be completely instructed in the teachings of science as I have insisted they should be — it would effect a wonderful revolution in the operations and productions of the farm, and render vastly more efficient and valuable, the industrial ability of the laborer. Knowledge would impress the signet of its own power and demonstrate the increased effectiveness of its companionship in every field and form of rural industry.

It would increase the actual *wealth* and *power* of the nation. Agriculture is the source and foundation of all production ; and upon this, depends, in a great measure, the extent and value of our national resources. *He*, has been denominated a public bene-

factor, who causes two blades of grass to grow where but one grew before. In this point of view, science is a public benefactor — it accomplishes this. It aids nature in the performance of her operations in the vast system of production. It studies her laws and elements, and uses them as instruments in the promotion of its purposes. It enters her laboratory, and appropriates for its own use, such agencies and materials as may seem meet and proper. The theories of the philosopher are tested in the crucible of experiment, and soon become valuable facts in the art and practice of husbandry. What before was derided as the vagary of fancy, now assumes the reality of truth, and ranks among the fruits of experience. The soil teems with a richer and more abundant harvest—the tree bends beneath a finer and larger fruit; and under the rays of science, the whole vegetable kingdom assumes a more luxuriant aspect and is invested with a more productive energy.

And here, I would observe, that the mere accummulation of wealth is not, and ought not to be, the prevailing, absorbing purpose of life. There are higher objects of being—broader fields of action. There is a moral and a mental nature in man to be unfolded and educated. There are social relations and enjoyments to be cultivated and strengthened and refined. There is a religious responsibility to be examined and discharged. We cannot release ourselves from the obligations these impose. They fasten themselves to our very humanity, and cannot be overlooked. Wealth, then, plays but a subordinate part in the theatre of human action, and ought ever to be held subservient to the great interests of society and our own moral and intellectual improvement. Our Republic ought to look beyond the mere amassment of wealth in laying the foundations of its power and rank, in the scale of empire. The glory and greatness of a nation do not consist in the majesty of its forests or the breadth and volume of its rivers—not in the heighth of its mountains, or the fertility of its valleys—not in the richness and variety of its minerals, or the expansiveness and grandeur of its scenery—but they consist in the majesty and solidity of its intellect — in the breadth and depth of its philosophy — in the volume and massiveness and grandeur of its moral power and in the activity — penetrativeness and expansiveness of its humanity: These form its true greatness, reveal its appropriate uses, and lift it up, so far as we can know, to its true position in the simple, yet sublime system of the Divine Mind.

Again —the influence of education upon the culture of the soil would be sensibly realized in the more extended application of machinery and the mechanic arts to the pursuits of the field. In this respect, the present century has been distinguished beyond any previous era. Reaping and thrashing machines, improved plows constructed upon scientific principles, and various other implements of husbandry too numerous to particularize, are all living illustrations of this truth. These improvements and inventions are the

results of but comparatively *few minds*, whose attention has been attracted to these subjects. Let us suppose, that the practical science and inventive genius characterizing *these few minds*, had reached and pervaded *the millions* engaged in farming; and that this mass of rude unlettered intellect had been solidly educated and made thoroughly alive to its power and its duties — what splendid results might we not have witnessed? What imagination can assign a limit to the varied and multiform applications which would have been made of machinery and the principles of mechanics to agriculture in all its departments and ramifications? The labors of the farm would have been vastly elevated in their character and infinitely expanded in their results upon individual happiness and human government.

This is not all. The same pervading influence would have enlarged the empire of *steam* as a vital element in the economy of labor. It would have been substituted and applied in very many more instances ere this, as a motive force in the place of animal and manual labor. In this enlightened age so fraught with improvement, too much of the work of the farm is performed by hand —too little by machinery. Efforts are now making by men of capital and intelligence, to plow by steam; and cautious observers believe with every probability of ultimate success. A four horse power steam engine of simple construction—so light that it may be moved from one point to another by two horses — can be purchased and erected for the sum of about three hundred dollars—and used at an expense of only one-sixth of a cord of wood *per* twelve hours. Here then, is an agency, economical, efficient, equable and never tiring, that may yet be made to perform a thousand offices of heavy work and drudgery now executed by the labor of the hand and the sweat of the brow. This is an important consideration in the advancement and economy of agriculture, because such an assistant cheapens production: It harnesses the elements to the machinery and implements of the farm, and makes them work at man's bidding by night and by day. It relieves from the exhaustion of physical energy arising from excessive labor. It gives to the laborer more time for moral and mental culture—elevates his position in life—enriches the producer—furnishes cheaper and more abundant food and clothing to the consumers, and confers a general benefit upon society, without injury or wrong to any one. These are important views and suggest many interesting and useful thoughts closely allied with man's moral and intellectual condition and the progressive development of the cause of civilization.

Again—Educated labor would teach us the multiplied and intimate relations which the important science of political economy bears towards the successful and efficient pursuits of agriculture.

It has been well observed, that the exact and comprehensive study of husbandry as a department of political economy — essentially and intimately interwoven with each other as they are—has never

been cultivated and appreciated by our statesmen, as it should have been. Our system of legislation has, in no instance, recognized fully these manifold relations; for if it had done so, a stronger arm would have been extended, and a more generous assistance rendered by government in the cause of agriculture.

The predominant principle in the economical operations of the farm, should be "the multiplication of the product, and the substraction of labor," or production at least cost. This is the first great lesson in the teachings of political economy; and its full wisdom and philosophy can only be learned and comprehended by a thorough, practical mental training. There is no royal road to the acquirement of this knowledge—for it embraces a great variety of learning—a careful consideration of the cardinal laws and intricate processes of nature in her operations and results. In its mastery, it demands patience, diligence and industry.

There are other useful lessons which a knowledge of this science teaches. It not only explains the true economy of production; but it unfolds to us the economy of distribution and consumption—the laws of exchange, and of supply and demand, and their relations to each other;—for political economy comprehends a knowledge of the management and regulation of the national resources and its productive property and labor; and these enter into the very elements of a nation's existence, power and durability.

This connection of the agricultural interest with the politico-economical affairs of the State will naturally lead us to an examination of the peculiar relations which agriculture, manufactures and commerce have towards each other;—for these constitute the three material sustaining elements of a nation's wealth and industry. In some shape or other, and to a greater or less extent, they must exist in every country; and the amount of intelligence pervading their multiplied and complex operations will be, nearly, in exact correspondence with the degree of civilization and refinement, to which the State has attained. This subject is an exceedingly important and interesting one, and deserves a more exact consideration.

In casting an observant appreciative eye over the diversified face of society, we perceive that it presents a most wonderful and complicated organization possessing its legitimate and appropriate movements, forces, wheels and balances—operating like a piece of elaborately constructed machinery — not always well adjusted—sometimes perchance disjointed, yet constantly in motion—endowed with a stupendous vital energy, and forever working out the same series of results in the social structure and political developments of our people and country.

To understand these movements, direct these forces, and completely unfold these energies, requires a comprehensive and accurate conception of the peculiar characteristics, complex relations and nice compensating influences of our republican form of government, and this is the business of a life time. But in pursuing this sur-

vey, we will discover there are three great interests sustaining and upholding the mighty fabric of this organization—agriculture, manufactures and commerce. These form the predominant elements in the growth, power and security of our republic—employ nearly all the capital of the country — draw around them nine tenths, if not nineteen twentieths of its manual and mechanical labor; and in their culture and advancement, they sustain nearly all the practical science of the age. Without them, society could not preserve its structure—man his civilization, or science her empire.

In this aggregation of national wealth and industry, agriculture lies at the foundation. It is the nourishing mother of the arts, and furnishes the *raw material* everywhere, upon which science and industry work in the shape of manufactures and the mechanic arts. Without this original production, we could not subsist, manufactures could not flourish, and commerce losing its aliment, would cease to be either important or respectable.

Agriculture furnishes the raw material as it is produced upon and withdrawn from the field;—this material almost uniformly requires further labor to be bestowed upon it before it is in a condition proper for use—the wheat must be turned into flour—the flax and the cotton must pass through a series of elaborate processes before it is made into cloth—the grape must be converted into wine —and this intermediate office is performed by manufactories. They fashion the material product for some useful purpose. They take it from the producer and prepare it for the consumer. Thus it is, as good, efficient husbandry advances, a corresponding demand for manufactories to work up the raw material, is created. Hence we discover the close relations and mutual dependencies existing between these two very important departments of labor in every country and in every condition of society.

But it is not sufficient for the soil to furnish the raw material or for machinery and manufactories to mould it into a condition fit for final use. Another important element is requisite. It requires transmission to the point where there is a demand for it. It must be brought home to the consumer. It must be conveyed to its destined market to be exchanged for other products; and this office in the system of political economy is denominated DISTRIBUTION.

The flour, and the pork and the cloth — the rice, the coffee and the sugar—are comparatively useless on the broad prairies of the west, or the more fragrant savannas of the south—to him who desires to use them on our Atlantic sea-board or in the European city. They must be transported to the market, where there exists a demand for the article, and where the highest price can be realized, or the best commercial commodities acquired in exchange. And thus, in this interchange of supply and demand—and in administering to the multiplied and complex variety of human wants among the various nations and societies of the earth arises the necessity of CONVEYANCE and EXCHANGE. *These*, buy and sell and

distribute the varied products of agricultural, mechanical and manufacturing labor among the different portions of the country and the numerous nations of the globe; and receive in payment the exchangeable values of those countries and nations — and this constitutes COMMERCE. When this distribution and these exchanges take place within the limits of our own country, it is termed domestic or internal commerce; when beyond our own limits and with other nations, it is denominated foreign or external commerce.

To direct and manage the ramified and expanded agencies of commerce with cheapness, safety and facility, some common and acknowledged standard of value is absolutely essential — and this standard is called MONEY. It constitutes a convenient representative of commercial values; and all articles entering into the widely diffused system of commerce are measured by it. To transmit these values from one point to another, whether contiguous or remote— to adjust and settle commercial balances as they may arise in the course of business and to establish credit and ensure prompt payment, Banking institutions are organized and incorporated, with faculties of discount circulation and exchange, whereby paper money is used, and drafts and bills of credit and of exchange, substituted in the place of the actual and necessarily expensive transmission of specie and of commercial products. These are all embraced in the accustomed operations of commerce, and are among its appropriate and most effective and economical instruments. They endow the commercial system with a flexibility and comprehensiveness — an efficiency and energy which renders it truly admirable and wonderful. This system is seen and felt on the line of every coast and upon the wave of every sea. No land is too distant for its reach—no enterprise too vast for its grasp. It possesses a power and universality, not yet sufficiently appreciated as a vital and controlling element in the cause of civilization.

Agriculture, manufactories and commerce are each linked with, and dependent upon the other. They must prosper or languish together. They are alike essential to the nourishment and preservation of society. Its organization, order and civilization could not be upheld and preserved without them. But agriculture is the productive and predominant interest. It possesses the capital, the labor and the physical power, and yet these great interests rest upon, and are interwoven with each other. "They all stand together; but they stand together like pillars in a cluster—the largest in the centre, and that largest is agriculture."

This train of reasoning very naturally suggests a few observations on the vast importance of cheap distribution to our State and its agricultural interests. This is beyond all controversy a matter of grave and vital interest to us—distantly located as we are from the great emporiums of business, capital and commercial exchange. It is a well established truth, that without extensive manufactories and flourishing commercial cities at home, we must be, and are de-

pendent upon the eastern cities on the Atlantic coast, to furnish us a market for the sale of our surplus produce and the purchase of a variety of the comforts, conveniences and luxuries of life. At the present time, our exportation is comparatively limited, owing to the recent settlement of our State and the immense migration flowing into it. The immigrant for the first year, is a purchaser and consumer, and of course creates a temporary home demand for our produce. We are also on the line of travel between the Northern States east of the Mississippi and Oregon and California; and the numerous migration which have been allured west to these new Territories, have also been extensive cash purchasers of our various productions. But these causes are quickly passing away — agricultural production beyond home consumption is rapidly accumulating, and very soon indeed — even in a few short years, our exportations will be quadrupled. These considerations impress upon us the practical importance of the topic under discussion.

Our average distance from the eastern markets may be safely estimated at one thousand miles, and the average price of freights upon the various lines of transportation and upon all our exports and imports at three dollars per hundred miles per ton, or thirty dollars per ton through-freight. This estimate is the result of the most careful calculation.

The value of lands — other things being equal — depends, in a great measure, upon the cost and value of their production. This cost and productive value must be determined—so far as the question of distribution is involved—upon the cost of freight, not only upon the articles transported, but upon the cost of freight upon those articles imported and entering into the business of production. This cost will depend upon the distance between the point of production and of consumption, and the facilities of transit. This element of distribution, it will be perceived, affords an important desideratum in the economy of agriculture.

The result of our geographical position is, that the western farmer is taxed upon every article he raises and transports to the eastern cities the sum of thirty dollars per ton, and the same amount per ton is levied on all which he purchases, and which is imported from the east.

Every farmer can make his own calculations, as to the effect of neighborhood to market, and cheap, safe and rapid transportation, upon the commercial value of his estate and its products. He must perceive at once the important office performed by distribution, and how deeply and pervadingly it affects the economy and profitableness of all rural industry. As you cheapen the expense and shorten the time of transportation between the producer and consumer, you, in a corresponding ratio, increase the market and actual value of lands.

It is important, and indeed essential to the complete development of our various resources, that both government and individ-

uals should promptly extend all the assistance and encouragement within their power towards the opening and improvement of our navigable streams and the construction of permanent lines of railroads throughout our State as the most economical and rapid mode of transit yet discovered.

In building railroads, I am well aware, the original expense is immense, and perhaps transcending the present means and capital of the country; yet, if we are true to the great interests around us —if we manifest a willingness to encourage them by material aid to the extent of our ability—if we contemplate the realities which enterprise, inspired by confidence, has sown broadcast in our midst —if we demonstrate the sincerity of our purpose by our energy and resolution, we will and can command Eastern and European capital to help us in our hour of need. We must, first of all, rely upon ourselves. The impulse, to move the ball must begin with us. We must put our shoulders to the wheel, and *then* call upon *Hercules*, and perhaps Hercules will not be needed. Forever remember, my friends, that wherever "there is an *iron will*, there will be an *iron way*."

Railroads, well constructed and conducted, are of general and permanent advantage to the country in which they are located, and add immeasurably to its wealth, intelligence and power; and in my judgment, the counties and districts of country through which they pass, should, in justice to the common benefit conferred, be taxed in aid of their construction. It is only by an associate contribution, they can be built, and the burthens should be so apportioned as to correspond with the advantages they yield. Railroads, are as essential *now* to the state of civilization and the accumulation and distribution of agricultural wealth, as canals were twenty-five years ago, or turnpikes and good roads half a century past. They constitute one of the wonderful improvements so pre-eminently distinguishing the present age—and are essential to our commerce, comfort and progress. Above all, are they indispensable to the farmer if he desires to be able to enter into a fair competition with those around him. We are a young and enterprising State—teeming with activity and intelligence — just beginning to march into line — to understand our resources and realize our powers — and soon deetined, I trust, to occupy a distinguished position in the sisterhood of States which forms the brilliant constellation of our Union.

By the census of 1850, the value of the improved farms of our State was estimated at 16,657,567 dollars, and the implements of husbandry and machinery at 1,172,869 dollars. In 1860, judging from our past advancement and the present tide of emigration flowing in upon us—I have no doubt this value will reach 75,000,000 dollars — carrying with it a corresponding aggregation of population, production and exportation. Cherishing these views, I would most earnestly commend to you the adoption of every honorable

means to diminish the expense of freights, and increase the facilities of transportation as really necessary and of the first importance to your success and prosperity in life.

Let the systems of railroads and internal improvements radiate from their common commercial centres, until they penetrate every section of the great and growing west, and form a net work of iron that shall bind our Union and our people together in the bonds of a common interest and destiny. The time was, when the narrow and illiberal policy of the rural districts in the neighborhood of large cities boldly opposed the extension of roads for commerce into the remote sections of the country—alleging, as a justification, that it would give rise to competition by furnishing an increased supply, and thus affect them injuriously. And it is a historical fact, in English policy, that during the early part of the last century, some of the counties in the neighborhood of London, petitioned parliament against the extension of the turnpike roads into the remote counties. These remote counties, they pretended, from the cheapness of labor and other causes, would be able "to sell their grass and corn cheaper in the London market than themselves, and would thereby reduce their rents, and ruin their cultivation."

But this narrow policy has passed away with the age that cherished it. A contrary tendency now manifests itself. The spirit of our people is that of radiation, dispersion and decentralization. We possess millions and hundreds of millions of broad and fertile acres—embracing a wide range of climate—of varied productiveness of soil and of vast extent of territory—ready for cultivation—and continually soliciting the hand of labor. They only require *muscle* and *will* to make them teem with wealth and gleam in beauty. Nearly six thousand years have these acres remained in a state of nature, untouched by the hand of man, while thousands and millions of human beings of stalwart form—with strong arms and willing hearts—created by the same God—inspiring the same atmosphere—endowed with the same faculties, and passing on to the same destiny with ourselves, have been suffering and starving for the want of food and employment. Surely there is gross injustice and partiality here—surely a righteous God never designed such a wrong to exist in a society conforming to His own will and purpose.

There is, in the following glowing lines, a boldness of sentiment and freedom of spirit which I love; and while I cannot, and do not commend the teachings of their philosophy in the abstract; yet, there is an earnest, impressive tone pervadidg them, which strikes home to the human heart, and touches cords and sympathies there, that will vibrate on and forever, until the soil is tilled and gives forth its fruits and its harvests to the utmost range of the requirements of humanity:

"The earth is the Lord's and the fullness thereof,"
Said God's most holy word;
The water hath fish, and the land hath flesh,
And the air hath many a bird;
And the soil is teeming o'er all the earth,
And the earth hath numberless lands;
Yet millions of hands want acres,
While millions of acres want hands.

Sunlight, and music, and gladsome flowers,
Are over the earth spread wide;
And the good God gave these gifts to men—
To men who on earth abide.
Yet thousands are toiling in poisonous gloom,
And shackled with iron bands,
And millions of hands want acres,
And millions of acres want hands.

'T is writ that "ye shall not muzzle the ox,
That treadeth out the corn;"
Yet, behold, ye shackle the poor man's hands,
That have all earth's burdens borne;
The land is the gift of a bounteous God,
And to labor his word commands;
Yet millions of hands want acres,
And millions of acres want hands.

Who hath ordained that the few should hoard
Their millions of useless gold,
And rob the earth of its fruits and flowers,
While profitless soil they hold:
Who hath ordained that a parchment scroll,
Should fence round miles of lands?
While millions of hands want acres,
And millions of acres want hands.

'T is a glaring lie on the face of day—
This robbery of men's rights—
'T is a lie that the word of the Lord disowns,
'T is a curse that burns and blights;
And 't will burn and blight, till the people rise
And swear, while they break their bands,
That the hands shall henceforth have acres,
And the acres henceforth have hands.

In this relation, it may be asked why the pursuits of the farm are so much behind the mechanic arts, manufactories and commerce, in the amount of skill and intelligence employed and developed in their operations. I will express my own views on this point in very few words:

1st. It is owing to the fact, that husbandry belongs to the country—necessarily extends over a large extent of territory, and thus prevents association — frequent interchange of opinion, and continued and convenient opportunity of comparing observations and experiments. This precludes that generous emulation and keen competion, so closely connected with all success and excellence.

2d. These rural pursuits do not admit of the same division of labor. From their very nature, every farmer must have a general knowledge and supervision of the entire operations of the field. Not so with those other pursuits—*they* permit of division into numerous ramifications—each demanding for its comprehension and accomplishment its own peculiar skill and education.

3d. Machinery and steam power can not be so extensively applied, or so efficiently and profitably used—owing to the *diffusive* character of agricultural labor.

4th. It has never received those aids and powerful stimulants arising from the corporate association of capital and labor; and which have so wonderfully characterized the progress and development of manufacturing, and commercial industry and production.

5th. The same direct and efficient encouragement has never been extended by Government to agriculture, which has been so generously extended to its rival interests.

These causes amply suffice to account for any differences or deficiencies that may be supposed to exist in point of active energy, practical science and real progress among these respective interests; and they demonstrate, most clearly, the necessity and duty of placing agriculture upon a broader basis and in a more elevated and commanding position.

There is one subject connected with rural pursuits and science of pervading importance, which I must not overlook;—although time prevents any thing more than a brief allusion to it: — I mean the tendency in our country to over-production without restitution—or to eventual exhaustion of the soil.

By excessive, continuous tillage, sterility follows, because there is the abstraction of the vital, fertilizing elements, without giving anything back to the earth, to again supply those elements. There is abstraction without restoration. The plant must have received the elements of its nourishment, growth and substance, either from the soil or the atmosphere; as we know these both perform their appropriate functions in the economy of the vegetable kingdom.

Now, it is demonstrably true, that where there exists continual abstraction, without restitution, exhaustion must inevitably follow. In every field of commercial enterprise, if capital is not replaced, in some way or in some shape, as rapidly as it is consumed, bankruptcy must inevitably ensue. So of machinery, if the wear arising from its use, is not repaired, the machine will soon lose its power and faculties of appropriate action. And, so is it equally true, of the soil; if its productive elements are absorbed without replacement, total barrenness must be the natural and necessary consequence.

It is said, the recuperative energies of nature are constantly replenishing the waste committed by the avarice and the ignorance of man. This is not entirely correct in point of fact. Nature, it is true, is ever busy refertilizing and reinvigorating; but experience has shown, and is every day demonstrating the startling fact, that the deterioration growing out of excessive and wasteful culture, far exceedeth the restorative power of nature.

High, and very satisfactory authority, assures us, that the average life of man, is sufficient to reduce the fertility of the soil he cultivates, to one half of its former production; and two or three

generations, amply sufficient to render it barren and worthless—and this impoverishment let it be remembered, brings with it, not only a correspondent diminution of national wealth, but of moral and political power and influence.

This excessive working of the soil—attributable, in a great measure, to the want of an enlightened forethought and proper intelligence, is already telling disastrously upon the productive wealth and revenue of some of the older States. New York and Massachusetts, Kentucky and Tennessee with each, a *large number of acres annually under cultivation*, has every year a diminished and diminishing production, arising from overcultivation.

Doctor Lee, formerly connected with the Agricultural Bureau, at Washington, says: "Of the one hundred and twenty-five millions of acres now under cultivation in the United States, four-fifths, or one hundred millions, are damaged to the extent of three dollars an acre per annum. By which remark, we mean, that complete restitution of the elements of crops removed—such as potash, soda, lime, magnesia, chlorine, phosphoric and sulphuric acids and ammonia—cannot be made short of an expense of three dollars per acre. All manuring, of every kind, implies the necessity of making restitution to the earth cultivated by man; but this first and highest duty of the cultivator and husbandman is now almost universally neglected." He further observes:

"An intelligent wheat grower in Wisconsin, writes to the Agricultural Department, that lands which have been cultivated only twelve years, in that new settled State, now yield but half the number of bushels per acre, which was obtained at the beginning. Other farmers, equally entitled to our confidence, corroborate this important information. Extensive corn growers, in Indiana, say, that river bottoms, that once produced from sixty to eighty bushels of corn per acre, now yield only from thirty to forty."

These are alarming facts — they are clearly established as true —and powerfully indeed do they commend themselves to your serious consideration.

Now, it is the simple, yet valuable office of chemistry, not only to designate the elements thus abstracted by the plant from the soil; but also to teach us how they may be restored.

This idea of restitution is said to be the noble offspring of modern science. Be this as it may, it is certainly the offering of compensatory justice to the misunderstood and violated laws of nature.

But it is agricultural chemistry—science teaching in the field of rural labor, and looking into, and laying open the laws and operations of nature that has unfolded so clearly and taught us so eloquently the reason, necessity and true idea of restitution. Without its lights, we should have groped in darkness—without its philosophy, we should have attempted to comprehend in vain; and we would only have discovered remedies and redressed the wrongs we were inflicting upon our mother earth, as we stumbled upon them

by accident, or ascertained them as the results of sad and disastrous experience.

The great and controlling purpose in scientific culture should be constant production without exhaustion;—the soil should never be suffered to become impoverished—for restitution should accompany its cultivation.

Chemistry, as a branch of agricultural science, is of very recent origin. "The earliest reference to the composition of vegetables, and the source of their food in an agricultural point of view, we owe to Jethro Tull." But it was not until near the close of the last century, that its real position and importance in the circle of rural employment were recognized and discussed by Lord Dundonald in his "Treatise on the intimate connexion between chemistry and agriculture." Previously to this period, De Saussure had pursued his experiments on this most interesting subject for many years. He carefully examined the principal phenomena connected with the life of plants, and opened up this broad and varied field which has, since that time, been so successfully cultivated.

But it was not until the year 1812, that public attention was strongly attracted to the pervading importance of this subject. During that year, Sir Humphrey Davy, at the instance of the Board of Agriculture, delivered a most brilliant and successful course of lectures on agricultural chemistry. "These lectures, written with all the elegance and precision which characterized their author's style, brought permanently before the public the results of Saussure's experiments, and contained a number of useful practical suggestions, many of which have been adopted into our every-day practice, and become so thoroughly incorporated with it, that their scientific origin has been altogether forgotten."

But it is said the curiosity and interest thus excited, soon died away, "and the whole subject lay in abeyance for a considerable number of years." "The truth is, that, at that time, agriculture was not ripe for science, nor science ripe for agriculture."

In 1840, a new spirit was awakened, by the publication of Liebig's treatise on "Chemistry in its application to agriculture and physiology." This work made a powerful impression upon the public mind, and opened veins of practical thought of exceeding richness and utility.

Liebig's treatise was succeeded in 1844 by Boussingault's *Economie Rurale*, containing "the accumulated results of a large number of investigations, both in the laboratory and in the field by the author himself, which have served to establish a great many important truths," and "must be considered as the foundation of a large part of our correct knowledge of scientific agriculture."

"The same year was marked by an event of equal importance in the history of scientific agriculture, namely: The foundation of the Agricultural Chemistry Association of Scotland, which was instituted through the exertions of a small number of practical farm-

ers, for the purpose of pursuing investigations in agricultural chemistry, and affording to its members assistance in all matters connected with the cultivation of the soil. That institution has formed the model of similar associations in London, Dublin, Belfast, and in Germany." It originated among the Scottish Tenantry of Mid-Lothian—practical, substantial men of solid understanding and intelligence—and it has produced a wonderful influence in extending the principles and applying the practical teachings of chemistry to the culture of the soil.

In March, 1840, was incorporated the "*Royal Agricultural Society of England*," a most powerful, enlightened and practical institution; and as this institution has exerted, and is now exerting a most surpassing and diffusive influence upon British agriculture, and is viewed as a model of its kind, worthy of imitation anywhere, I take the liberty of recapitulating its objects and field of labor as contained in its charter of incorporation. These, as enumerated, are tenfold.

1st. To embody such information contained in agricultural publications and in other scientific works, as has been proved by practical experience to be useful to the cultivators of the soil.

2d. To correspond with agricultural, horticultural and other scientific societies, both at home and abroad; and to select from such correspondence all information which, according to the opinion of the society, may be likely to lead to practical benefit in the cultivation of the soil.

3d. To pay to any occupier of land, or other person, who shall undertake, at the request of the society, to ascertain by any experiment, how far such information leads to useful results in practice, a remuneration for any loss which he may incur by so doing.

4th. To encourage men of science in their attention to the improvement of agricultural implements — the construction of farm buildings and cottages—the application of chemistry to the general purposes of agriculture — the destruction of insects injurious to vegetable life and the eradication of weeds.

5th. To promote the discovery of new varieties of grain and other vegetables useful to man, or for the food of domestic animals.

6th. To collect information with regard to the management of wood, plantations and fences—and on every other subject connected with rural improvement.

7th. To take measures for the improvement of the education of those who depend upon the cultivation of the soil for their support.

8th. To take measures for improving the veterinary art as applied to cattle, sheep and pigs.

9th. At the meetings of the society in the country, by the distribution of prizes, and by other means, to encourage the best mode of farm cultivation, and the breed of live stock.

10th. To promote the comfort and welfare of laborers, and to encourage the improved management of their cottages and gardens.

Farmers of Iowa:—It is such an institution as this—incorporated by the State — modified so as to meet the wants of the State—amply endowed by the State, and controlled by the agricultural interests of the State, that you imperatively require and must have. Its influence would be at once powerful, protective and permanent. If properly conducted and sustained, it would create a new era in the history and condition of agriculture. Its experiments, correspondence and collection of useful facts, annually published and circulated throughout the country, would diffuse an amount of solid information, and communicate an impulse and energy to rural pursuits, of which we can now form no adequate conception. If, for the full attainment of this purpose there exists any deficiency of constitutional power, in all probability we will soon have a new constitution, and then your interests can be properly represented and provided for. Perform your duty—insist upon your rights in our constitutional conventions and legislative halls, and all will be well with you.

And why, in the name of common justice, should not our State and Federal governments afford equal protection with other countries to agriculture? It is the great interest of the nation.

In *France*, there are three hundred and fifty agricultural schools connected with experimental farms, and one hundred and seventy-five agricultural institutions.

In *Prussia*, there are thirty-two agricultural schools, munificiently endowed and extensively patronised.

In *Russia*, where the haughty Muscovite sways his sceptre over many millions of subjects, there are sixty-eight agricultural institutions, conducted upon broad principles of science, and teaching thousands in the knowledge and practice of this noble, and with us, too much neglected, pursuit.

"Agriculture," says Sully, "is the breast from which the State derives its support and nourishment." Let the State give back to its mother not only its affectionate remembrance, but its material aid and encouragement.

Fellow-citizens: Time admonishes me that I must draw this discourse towards a close. Already more time than intended, has been occupied; but the subject is one of high concern, and replete with suggestive thought. Statistics and illustrative examples might easily have been more extensively introduced; yet, they are of easy access, and made to order in every treatise devoted to the agricultural resources and productions of the country. My object has been to deal in leading truths—pervading principles, addressed to your own good sense and understanding; and not to make a display of learning and of familiarity with the abstract science of the schools and the oracular speculations of the philosopher. I have endeavored—imperfectly it is true, yet with affectionate earnestness — to impress upon your hearts the necessity and manifold advantages of education and science in your pursuits; and alluded to one essential and practicable means of accomplishing this purpose.

We have come together to hold an earnest council—to interchange unreservedly our respective opinions, and to deliberate on subjects of general interest and overshadowing national importance. If science confers the eminent advantages to which I have alluded—if chemistry

really reveals some of the most important phenomena connected with the laws of growth and production—if educated mind does in fact elevate the character and increase the efficiency of all human effort—then it becomes an inquiry of searching and vital interest to know how best, these lights and influences shall be made to penetrate your various pursuits; and how you shall be enabled to avail yourselves permanently of their benefits. Your wives and your daughters have a common interest in this inquiry, for whatever improves your condition, elevates theirs—whatever enlightens your labors, reflects its influence upon them. They give cheerfulness to the fire-side circle—smooth the rough paths of life—come like ministering angels into the chamber of sickness, and cast the rainbow of hope over the darkest moments of life.

It has been my aim and purpose to draw your attention to your own true interests and real position in the circle of social industry and wealth; and to point out, and impress upon your consciences, the necessity that exists of your acquiring additional power, influence and respectability.

The age in which we live and move, is one of action and progress. It is almost revolutionary in its character. We stand on the verge of great events—between the receding and advancing generations — "a link in the great chain of eternal order" Let us meet the requisitions of life with a bold front and manly heart, prepared for every emergency as it may arise. Let us plant the principles of agricultural science and education, broad cast and deep over our land, and cultivate them until they yield us a rich and abundant harvest. Let us compel government to a recognition of the rights of the husbandman, and to the granting to him of that liberal encouragement which his agency in the system of human industry and national wealth rightfully demands.

But above all these, let me say to you, in language solemn, truthful and impressive: *Rely upon yourselves. Depend not, on foreign assistance, outside of your own calling; but upon your own power and influence and action. Act for yourselves, as cultivators of the soil, as citizens, as individuals. Repose confidingly upon your own energies, now, and in all time to come, and in every movement affecting your interests!*

Will you not be true men — true, to the age in which you live — true, to the soil that nourishes you — true, to the country which protects you—true, to the great interests which have been committed to your care? In the name of justice, I trust that you will—in the name of freedom, I implore you to press forward to the noble destiny I see beaming out from the future.

In the beautifal arrangements of the animal economy, we find that the blood cometh up from the extremities to the heart, to receive its nutritive and vitalizing elements, and returneth again to noorish and re-energize the human system. So may it be with this assembly. You have come up, from the distant portions and extreme lines of the State, to interchange views and sentiments—to learn more of your pursuits, and give them a higher character and science—to improve your condition and strengthen, consolidate and enlighten the great interest of agriculture; and I pray God that you may return to your respective homes—better and wiser men—with more enlarged views and exper-

ience — with a stronger love for your employment—with higher purposes in life—with a loftier conception of duty and with an immovable purpose to cease not striving, until you work out the high destiny of agriculture, and place it in its true position in the diversified system of human government.

And beyond all, my fellow citizens, may I indulge the fond hope as you take affectionate leave of each other, and turn your faces once more homeward, you will be accompanied by a solemn and profound conviction, that it was well—that it was fortunate—that it was profitable — you were here in the midst of this hospitable people, to participate in the first organized representation of the agricultural wealth, power and intelligence of this young and prosperous State, now boldly launched upon the course of empire, and destined to become an imperial jewel in the crown of American liberty.

A New Sugar Plant.

The scarcety of corn in France has drawn attention to a new plant, recently introduced from China, which promises to supersede to a certain extent the use of beetroot in the manufacture of sugar and the distillation of alcohol. The Agricultural Committee of Toulon has recently addressed a report to the Minister of War, with respect to the uses of the plant in question. It is called the *sorgho*, or *holcus saccharatus*, and was first introduced into France in 1851, by M. de Montigny, the French Consul in China, who sent some grains of the seed to the Government. Since then the culture of the plant has been commenced with success in Provence, and promises to be of great advantage to Algeria. The *sorgho* has been called the "sugar-cane of the North of China," and numerous experiments have recently been tried, with a view to ascertaining if it possesses the properties necessary for producing a crystallizable syrup, so as to become a rival to sugar-cane and beetroot. According to the report of the Toulon Agricultural Association, it would appear to have those properties. The fact has been ascertained by a series of experiments made in the Department of the Var. It also appears to be richer in the saccharine principle than any known plant excepting the vine. Beetroot contains from 8 to 10 per cent. of sugar; the *sorgho* produced from 16 to 20 per cent., from which 8 to 10 per cent. of pure alcohol, fit for all industrial and domestic purposes, can be produced. The refuse is excellent food for cattle, who are very fond of it. The plant grows with great rapidity, and does not require irrigation. The *sorgho* is not a new discovery, as it has been used from time immemorial by the inhabitants of the North of China, by whom large quantities of sugar are extracted from it. But that is the first time it has been introduced on anything like an extensive scale in Europe.—(*American Agriculturist.*)

COMMERCIAL DEPARTMENT.

COMMERCE OF THE UNITED STATES.

Summary statement of the value of the exports of the growth, produce, and manufacture of the United States, during the year commencing on the 1st day of July, 1853, and ending on the 30th of June, 1854.

PRODUCT OF THE SEA.			
Fisheries—			
Oil, spermaceti		$1,105,907	
Oil, whale and other fish		490,426	
Whalebone		817,817	
Spermaceti candles		77,991	
Dried or smoked fish		389,973	
Pickled fish		162,187	
			$3,044,301
PRODUCT OF THE FOREST.			
Wood—			
Staves&head'g,shing's,boards,hewn timb.	$5,122,834		
Other lumber	165,178		
Masts and spars	130,522		
Oak bark and other dye	95,863		
All manufactures of	2,837,270		
Naval stores,tar, pitch, rosin & turpentine	2,066,306		
Ashes, pot and pearl	322,728		
		10,740,701	
Ginseng		17,339	
Skins and furs		888,531	
			11,646,571
PRODUCT OF AGRICULTURE.			
Of animals—			
Beef, tallow, hides, horned cattle	2,757,022		
Butter and cheese	1,258,393		
Pork (pickled), bacon, lard, live hogs	11,061,016		
Horses and mules	200,098		
Sheep	15,194		
Wool	33,895		
		15,325,618	
Vegetable food—			
Wheat	12,420,172		
Flour	27,701,444		
Indian corn	6,074,277		
Indian meal	1,002,976		
Rye meal	112,703		
Rye, oats and other small grain and pulse	576,195		
Biscuit or ship-bread	495,340		
Potatoes	121,680		
Apples	51,706		
Rice	2,634,127		
		51,190,680	
			66,516,298
Cotton			93,596,220
Tobacco			10,016,046
Hemp			93,699
Other agricultural products—			
Flaxseed		4,958	
Hops		63,763	
Brown sugar		220,256	

Summary statement of the value of the exports, &c.

(Continued.)

Indigo		1,320	
			290,297
MANUFACTURES.			
Wax		87,140	
Refined sugar		370,488	
Chocolate		12,257	
Spirits from grain		280,648	
Spirits from molasses		809,965	
Molasses		130,924	
Vinegar		16,945	
Beer, ale, porter, and cider		53,385	
Linseed oil		28,609	
Spirits of turpentine		1,055,720	
Coaches and other carriages		762,559	
Household furniture		244,638	
Hats		174,396	
Saddlery		53,311	
Tallow candles and soap		888,557	
Snuff and tobacco		1,550,327	
Leather boots and shoes		893,723	
Cables and cordage		186,766	
Gunpowder		211,665	
Salt		159,026	
Lead		26,874	
Iron—			
Pig, bar and nails		302,279	
Castings		458,202	
All manufactures of		3,449,869	
Copper and brass, and manufactures of		91,984	
Medical drugs		453,752	
			12,754,009
Cotton piece goods—			
Printed or colored	1,136,493		
Uncolored	3,927,148		
Thread and yarn	49,315		
All manufactures of	422,560		
		5,535,516	
Flax and hemp			
Cloth and thread		24,456	
Bags and other manufactures of		55,261	
Wearing apparel		200,420	
Earthen and stone ware		33,867	
Combs and buttons		37,493	
Brushes of all kinds		9,486	
Billiard tables and apparatus		3,204	
Umbrellas, parasols and sunshades		11,544	
Morocco & other leather not sold by the pound		15,882	
Fire-engines and apparatus		6,597	
Printing presses and type		33,012	
Musical instruments		126,062	
Books and maps		187,335	
Paper and stationery		191,843	
Paints and varnish		121,733	
Glass		229,382	
Tin		30,698	
Pewter and lead		16,478	
Marble and stone		88,327	
Quicksilver		94,335	
Gold and silver and gold leaf		1,311,513	
Artificial flowers and jewelry		50,471	

Summary statement of the value of the exports, &c.
(Continued.)

Trunks		23,673	
Brick and lime		33,194	
			8,471,782
Coal			443,506
Ice			202,118
Gold and silver coin and bullion			38,062,570
Articles not enumerated—			
Manufactured			4,953 712
Raw produce			1,956,677
Total			252,047,806

F. BIGGER, Register.

TREASURY DEPARTMENT, Register's Office, November 15, 1854.

Number and class of vessels built in the U. S. in the year ending June 30, 1854.

States and Territories.	Ships and barques.	Brigs.	Schooners.	Sloops and can'l boats	Steamers.	Total No. of vess's built.	TOTAL TONNAGE Tons and 95ths.
Maine	156	78	99	12	3	348	168,631 54
New Hampshire	9	....	....	....	2	11	11,980 12
Vermont	.....	....	1	3	..	4	227 34
Massachusetts	82	4	87	4	3	180	92,570 24
Rhode Island	5	....	3	1	2	11	5,726 23
Connecticut	10	1	30	8	2	51	10,691 13
New York	46	10	89	85	70	300	117,166 69
New Jersey	.....	....	33	27	9	69	8,554 17
Pennsylvania	7	4	27	124	75	237	36,768 25
Delaware	.....	....	29	1	4	34	3,621 45
Maryland	13	3	101	1	4	122	20,352 90
District of Columbia	.....	....	....	42	2	44	2,814 24
Virginia	1	....	9	3	6	19	3,227 59
North Carolina	.....	....	32	3	3	38	2,531 84
South Carolina	.....	....	13	10	..	23	1,161 94
Georgia	.....	....	1	....	2	3	666 59
Florida	.....	....	7	....	..	7	562 41
Alabama	1	....	4	2	2	9	1,999 78
Mississippi	.....	....	3	....	..	3	77 15
Louisiana	1	....	6	5	2	14	1,508 52
Tennessee	.....	....	....	....	2	2	208 90
Missouri	.....	....	....	2	7	9	3,070 82
Kentucky	.....	....	....	....	22	22	6,823 71
Illinois	1	3	8	4	1	17	3,363 70
Wisconsin	.....	....	26	....	..	26	2,946 04
Ohio	.....	4	20	27	41	92	17,015 49
Indiana	.....	....	....	....	4	4	2,400 51
Michigan	1	5	22	12	8	48	7,788 21
Texas	1	....	....	....	..	1	124 48
California	....	....	11	10	5	26	1,023 09
Total	334	112	661	386	281	1,774	535,636 01

Statistical view of the commerce of the United States, exhibiting the tonnage of American and foreign vessels arriving from ending June

COUNTRIES.	COMMERCE. VALUE OF EXPORTS. Domestic produce.	Foreign produce.	Total.
Russia	$335,521	$145,095	$480,616
Prussia	.....	.....	.....
Sweden and Norway	1,085,602	39,324	1,124,926
Swedish West Indies	12,741	.....	12,741
Denmark	87,870	23,547	111,417
Danish West Indies	928,924	34,026	962,950
Hamburg	2,255,519	618,761	2,874,280
Bremen	8,386,077	825,901	9,211,978
Holland	2,299,710	142,956	2,442,666
Dutch East Indies	109,203	75,573	184,776
Dutch West Indies	371,380	22,065	393,445
Dutch Guiana	53,745	7,678	61,423
Belgium	3,848,890	1,158,004	5,006,894
England	135,111,708	5,563,631	140,675,339
Scotland	3,097,662	190,336	3,287,998
Ireland	1,006,017	86,485	1,092,502
Gibraltar	446,445	81,327	527,772
Malta	148,518	21,245	169,773
Hanover	.....	.....	.....
British East Indies	567,193	69,219	636,412
Cape of Good Hope	292,628	7,330	299,958
British Honduras	203,913	58,728	262,641
British Guiana	718,096	1,153	719,249
British West Indies	4,756,398	153,277	4,909,675
British American Colonies	4,693,771	2,572,383	7,266,154
Canada	10,510,373	6,790,333	17,300;706
Australia	2,999,635	149,444	3,149,079
Falkland Islands	.....	.....	.....
Other British possessions	.....	.....	.....
France on the Atlantic	29,749,466	978,355	30,727,821
France on the Mediterranean	1,218,786	201,374	1,420,160
French West Indies	551,525	60,502	612,027
French Guiana	100,148	685	100,833
French possessions in Africa	.....	.....	.....
Spain on the Atlantic	1,390,348	.....	1,390,348
Spain on the Mediterranean	3,212,368	31,040	3,243,408
Teneriffe and other Canaries	19,613	804	20,417
Manilla and Philippine Islands	27,852	46,650	74,502
Cuba	8,228,116	323,636	8,551,752
Other Spanish West Indies	990,886	60,997	1,051,883

the value of exports to aud imports from each foreign country, and
and departing to each foreign country, during the year
30, 1854.

Value of imports.	NAVIGATION.			
	AMERICAN TONNAGE.		FOREIGN TONNAGE.	
	Entered the United States.	Cleared from the U. S.	Entered the U. S.	Clear'd from the U. S.
$1,544,235	11,487	3,891	945	1,485
47,773	519	.....	.....	295
515,178	4,747	4,731	5,623	4,896
22,590	1,166	367	.....	.....
8,097	.....	714	567	1,894
286,044	12,749	22,846	6,992	7,984
2,322,971	3,423	5,717	35,014	28,968
14,643,927	34,661	18,048	129,576	74,252
1,695,970	10,830	15,204	8,865	15,004
1,041,609	8,545	3,638	441	4,313
534,978	15,166	7,920	4,808	690
104,236	4,899	2,927	.....	130
3,462,241	36,480	42,532	13,217	11,171
140,388,733	826,359	858,970	482,122	438,246
5,820,469	30,856	22,018	86,895	23,003
229,335	3,781	9,120	26,037	14,432
59,673	197	12,189	862	624
83,695	581	3,197	.....	302
.....	.....	.....	628	.....
5,378,321	56,664	45,812	1,379	585
448,903	2,887	3,869	477	381
288,954	5,076	4,189	2,821	3,537
47,489	5,129	12,131	1,172	3,161
1,126,417	56,955	97,389	40,762	39,678
2,206,021	121,105	295,781	358,460	537,309
6,721,539	867,489	880,941	674,188	648,239
214,202	4,548	39,421	3,794	4,989
.....	255	105	216	.....
4,344	.....	.....	.....	.....
32,892,021	215,482	212,324	23,882	14,925
2,889,372	17,666	17,728	7,951	3,166
161,085	3,514	13,576	5,325	6,097
29,618	990	2,234	.....	.....
.....	.....	.....	.....	131
538,504	8,451	8,940	1,966	3,164
1,579,074	13,740	12,140	11,750	37,224
39,598	1,099	1,046	399	.....
2,965,282	22,614	16,798	1,935	843
17,124,339	467,356	398,049	42,182	25,188
2,850,353	52,228	31,014	8,710	8,528

Statistical view of the commerce of the U. S., exhibiting

COUNTRIES.	COMMERCE. VALUE OF EXPORTS. Domestic produce.	Foreign produce.	Total.
Portugal	$127,140	$23,715	150,865
Madeira	47,708	.....	$47,708
Fayal and other Azores	10,030	440	10,470
Cape de Verdes	30,037	2,208	32,245
Italy	1,586,327	165,439	1,751,766
Sicily	246,151	13,900	260,051
Sardinia	188,305	2,020	190,325
Tuscany	11,735	37,032	48,767
Trieste&oth.Austri. ports	1,697,319	206,290	1,903,609
Turkey	219,496	105,702	325,198
Hayti	1,880,187	329,538	2,209,725
Mexico	2,091,870	1,043,616	3,135,486
Central America	250,539	58,345	308,884
New Grenada	855,254	82,052	937,306
Venezuela	1,131,604	69,279	1,200,883
Brazil	4,046,857	192,384	4,239,241
Oriental Rep. of Uruguay	450,855	62,102	512,957
Argentine Republic	658,720	103,005	761,725
Chili	1,942,330	250,929	2,193,259
Peru	651,707	33,448	685,155
China	1,293,925	104,163	1,398,088
West Indies generally	157,049	.....	157,049
Europe generally	5,050	.....	5,050
Asia generally	.....	200	200
Liberia	.....	.....	.....
Africa generally	1,716,924	88,048	1,804,972
South America generally	47,241	109,308	156,549
South Sea Islands	886,779	66,036	952,815
Ecuador	.....	.....	.....
Pontifical States	.....	.....	.....
Greenland	.....	.....	.....
Pacific Ocean	.....	.....	.....
Atlantic Ocean	.....	1,560	1,560
Indian Ocean	.....	.....	.....
Japan	.....	.....	.....
Sandwich Islands	.....	55,891	55,891
Northwest Coast	.....	.....	.....
Uncertain places	.....	.....	.....
Total	252,047,806	23,748,514	275,796,320

TREASURY DEPARTMENT, Register's Office, November 30, 1854.

the value of exports and imports, &c.—(CONTINUED.)

Value of imports.	NAVIGATION.			
	AMERICAN TONNAGE.		FOREIGN TONNAGE.	
	Entered the United States.	Cleared from the U. S.	Entered the United States.	Cleared from the United S.
243,592	1,154	2,866	5,012	5,094
30,007	2,270	821	536	286
21,584	2,186	560	124	463
8,985	336	4,391	.....	.....
971,728	.....	.....	.....	.....
959,300	24,190	3,862	15,357	3,713
85,676	590	10,688	2,198	2,246
1,152,717	12,466	2,386	4,819	387
741,919	1,791	13,015	1,941	5,401
803,114	10,018	3,948	.....	569
2,357,252	48,322	38,245	6,031	4,797
3,463,190	37,569	29,758	8,605	15,173
2,360,422	84,197	85,314	1,467	3,499
1,478.520	160,967	170,460	1,950	1,164
3,072,649	16,616	12,263	3,893	4,074
14,110,387	77,910	60,348	14,612	2,829
457,179	3,449	17,892	531	1,751
2,144,971	11,245	8,526	1,669	1,830
3,332,167	19,403	22,371	22,316	22,403
1,005,406	158,400	121,825	21,322	36,685
10,506,329	51,196	68,658	19,230	18,547
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
60,730	.....	.....	.....	.....
.....	215	639	.....	.....
1,387,560	12,932	18,572	1,361	1,709
235,693	594	700	.....	.....
10,103	3,966	3,487	2,097	536
57,534	1,981	.....	.....	192
.....	.....	.....	255	.....
.....	445	409	.....	.....
.....	41,186	48,449	1,078	2,111
60	10,714	6,412	.....	.....
.....	1,350	3,814	.....	.....
.....	.....	500	.....	.....
119,130	22,287	19,835	1,451	1,417
.....	2,082	2,862	4,408	6,092
.....	394	.....	.....	.....
301,494,094	3,752,115	3,911,392	2,132,224	2,107,802

F. BIGGER, Register.

Pacific Railroad.—President's Report.

REPORT of the President of the Pacific Railroad to the Stockholders:

OFFICE PACIFIC RAILROAD,
St. Louis, March 26th, 1855.

In compliance with the requirements of the charter, the Directors of the Pacific Railroad herewith submit to the stockholders an exhibit of the affairs, and the condition of the company for the past year, ending the 1st day of March, instant.

The negotiations alluded to in the last annual report of the stockholders, having failed, owing, perhaps, in a great measure, to the increasing stringency in the money markets of the world during the past year, made it apparent that the company had not, nor could not, on its own credit, obtain sufficient means to complete that portion of the road, then under contract, to Jefferson City. This emergency was first made known to the stockholders at a public meeting, and afterwards by means of the public press, to the citizens of the county and city of St. Louis.

A proposition was then made for the county, through its executive officers, to make an additional subscription of $1,200,000 to the capital stock of this company, under the provisions of the general railroad law. They very properly referred it, for "advice and instruction," to the people. They, with an unanimity which entitles them to great credit, gave their sanction to the subscription, thereby voluntarily taxing themselves to the amount of said subscription.

By the provisions of the aforesaid law, those who had previously become subscribers to the capital stock in any of our railroads, were exempt from its operation. With a few exceptions, our stockholders relinquished their rights in the matter, and came forward to bear their additional proportion to this burthen.

This subscription was made payable in four annual instalments of $300,000 on each—the first of which has already been paid. Thus have the people of this county and city shown to the people of the other portions of our State their faith in the utility and necessity of the enterprise in which we are engaged. So soon as this subscription was made, the company executed their anticipation bonds for the same amount pledging that subscription for their redemption. That portion of them first maturing we were enabled to sell for cash, which was applied towards the completion of the graduation and masonry. Those having the longest time to mature, we made use of as collateral security in the purchase of the rails required for the completion of the second division of our road.

The disposition of these entitled us to an equal amount of State bonds, which, so long as they could be sold at par, gave us the means of prosecuting our work with considerable energy. Owing, however, to the unusual heat of last summer, the work did not progress as rapidly as we desired. Still, no efforts on the part of your Board were spared to urge it forward. As soon as the cold weather set in—we were met with another, though not unlooked for, difficulty. The continued pressure in the money market, had given us cause to fear that we might not be able to find sale for our State securities at their par value, at which price, under the then existing laws, we were compelled to hold them.

The free Banks of the State of Indiana, and perhaps of other States—whose circulation was based on the pledge of public stocks —had become the purchaser of a large amount of our State bonds. Owing to the panic which existed last fall in regard to this species of circulation, the banks issuing it were suddenly compelled to redeem it. To do so, it became necessary to dispose of their sureties, thus throwing at once upon a stringent money market, a large amount of our State Bonds, which were sold at most ruinous sacrifices—sales being absolutely made as low as 76½ cents on the dollar.

Yet, notwithstanding we were thus entirely cut off from realizing anything from this portion of our assets, still we have managed, by the Directors becoming personally responsible for large sums, (which have since been paid,) to keep the work in full progress. Some time in February the Legislature passed an act removing the restriction in regard to the sale of the State bonds—issued to the railroad companies — and at the same time loaning this company $200,000 from the State treasury for four and six months, on a deposit of the same amount of State bonds.

This measure afforded us such relief, that we were enabled to meet all engagements of the company promptly and without dishonor. Considering the money crisis which we have had to pass through, and the large sums which we have had to pay during the past year, we may well congratulate ourselves at this result, especially when we consider the vast number of both public and private enterprises which have been within that time brought to a stand still.

The following is an approximate estimate of stock account:

Subscription East of Jefferson City:

City and county of St. Louis (original)..	$1,000,000	
Tax subscription, 1854.....	1,200,000	
Private svbscription, about.....	715,000	
		$2,915,000

West of Jefferson City, and applicable to any part of the road West of that point.

	County.	Private.	
In Moniteau county.....	62,200	12,800	75,000

In Morgan	"	25,000	9,400	34,000	
In Henry	"	50,000	500	50,500	
In Pettis	"	70,000	20,000	90,000	
In Johnson	"	50,000	26,000	76,000	
In Jackson	"	75,000	22,000	97,000	
In Cooper	"	.....	60,700	60,700	
In Lafayette	"	.....	25,100	25,100	
In Cass	"	.....	100	100	
					$508,800

Amount brought forward.....$3,423,800

The following are conditional subscriptions made by the respective counties, with the conditions attached:

Johnson Co. in the bonds of the Co., the money to be expended within the Co.....100,000
Pettis Co. in the bonds of the county.....100,000
Jackson Co. in cash, to be expended within the county.....100,000 — 300,000

$3,723,800

The stock paid in is as follows:

Private subscription East of Jefferson City...605,247
County and city of St. Louis.....1,000,000
Paid of the St. Louis county tax subscriptions, in cash and bonds.....525,000
Company's notes given for iron, and secured by a pledge of anticipation bonds of the Co. based on tax subsbription.....370,000
Anticipation bonds sold..... 45,000
Subscriptions collected west to Jefferson City 52,282 — $2,597,529

The unused and unpaid stock is as follows, East of Jefferson City:

St. Louis county bonds..... 83,000
Anticipation bonds in hands of Co.....162,000
Anticipation bonds pledged as collateral beyond the face of the notes given for iron... 63,000
Unpaid private subscription.....109,763
Unpaid West of Jefferson City, unconditional408,508
Unpaid West of Jefferson City, conditional...300,000 — $1,126,271

Total amount of subscriptions paid and unpaid.....$3,723,800

The means relied upon for the opening of the road may be summed up about as follows:

Anticipation and St. Louis county bond.....310,000
Collections on private stock, estimated..... 30,000

State bonds now on hand	130,000	
Cash in hands of treasurer	90,000	
		$560,000
The expenditure of the above assets in the construction will entitle the company to nearly the amount of State bonds authorized by the State — say $500,000 more than what has already been issued		500,000
Total		$1,,060,000

To open the road to Jefferson City, the Engineer's estimates are as follows:

For contractors and engineering, &c.	865,000	
For construction train	35,000	
For seventh street work	10,000	
For rolling stock	120,000	
For payment of July interest	75,000	
For freight depots	30,000	
For duties on iron and freight for same, from New Orleans to Missouri river	135,000	
For general office and miscellaneous	20,000	
		$1,290,000

By the above it will be seen that if all the assets of the Company were converted into cash, there would still be a deficit to open the road to Jefferson City. But as the Company has but a small amount of floating debt, we suppose that it may be increased to an extent to make good this deficiency without much inconvenience or difficulty.

To convert the securities of the Company into cash, as rapidly as may be needed, will require the active exertions of your Board. But with the growing ease in the money market of the world, we think it may easily be accomplished.

The total amount expended by the Company at the date of the last annual report, was $2,780,699 26. The amount expended since that date, in the construction and equipment is $2,267,128-96, and for that portion of interest justly chargeable to the construction of the first division, $44,348 51. For fuel on hand $14,352 00. Total expenditure to this date, $4,970,266 83, as will more fully appear by a reference to the engineer's report, herewith attached.

The road was opened from Franklin to Washington, 17½ miles, (making in all 54 miles,) on the 10th day of February, on which daily trains are running. The rails are now being laid west of Washington. The graduation and masonry of the entire second division is in a very great state of forwardness, and we see no reason to doubt (if the necessary funds are provided,) but what the road can be opened to Jefferson City by the 1st of September,

for travel and traffic. The rails for it are now at New Orleans, and a contract has been made for their delivery within sixty days, at such points on the Missouri river as the engineer may direct.

Messrs. Palm & Robertson have, within a few weeks past, placed another locomotive, "the Laclede," upon our track, which compares favorably—both as regards the beauty of its finish, as well as its efficiency—with any of those imported from the most celebrated eastern shops. Their enterprise and success in this branch of business, cannot be otherwise than a just source of pride to every well-wisher of our city. In this connection, it may not be amiss to mention what many of our own citizens are not aware of, that Messrs. Gage & Co. have successfully established the manufacture of car wheels within our city. These wheels, manufactured from the celebrated Iron Mountain iron, have proved equal to any within our knowledge. We have a large number of them in use, and thus far, none of them have ever broken.

We venture to predict that "Gage's" car wheels will, so soon as their merits are more widely known, become as celebrated on the Western, as are Bush & Lobsdell's on the Eastern roads.

It has thus far been the policy of this Company to encourage the manufacturing interests of St. Louis, which are daily rising in importance, and increasing with wonderfull rapidity. The chairs and spikes to lay the first portion of our track were imported from distant cities. Since then, Messrs. Harrison, Chouteau & Valle, and Messrs. Grey & Clark have commenced their manufacture on an extensive scale, and now supply our wants at a less price than those imported. The construction of our cars at the company's shops, gives employment to a large number of mechanics, and increased consumption of lumber, iron and other materials. By this policy you retain a large amount of money here, that would otherwise have to be sent abroad for their purchase.

With the establishment of a Rolling Mill, for the manufacture of iron rail, we should be entirely independent of our neighbors for all the necessary materials, which enter into the construction of railroads. May we not with confidence anticipate the consummation of this desirable event, so soon as the Iron Mountain road shall be completed to the base of those exhaustless deposites, of the raw material, which will then, as now, be brought to our very doors.

The engineer's report will inform you that full and accurate surveys have been made the past season on the third and fourth divisions, and the whole put under contract; to progress, however, no faster than the collections of the subscriptions west of Jefferson City will justify; as yet but a small amount has been expended on that portion of the road.

During the past year it became (from a variety of circumstances) apparent to the friends of internal improvement, in this State, that they could not reasonably hope for the completion of our con-

templated railroads, on the basis on which they were originally started. The stupendous frauds perpetrated by those having some of these works in charge, which were brought to light during the past year, together with a general falling off in dividends, made capitalists look on all kinds of railroad securities with suspicion, and more especially on those having a prior lien on them.

It was therefore thought advisable to make an attempt to change our system; a general plan was marked out by some of the prominent friends of these improvements looking to a release of the State lien, and a conversion of same into a second mortgage, or the preferred stock of the several companies. The latter would have been the most acceptable, as well as the most serviceable to them—the adoption of either making the State's interest perfectly secure. This would have enabled the companies to have issued first mortgage bonds for the completion of our roads. For their security we could offer a road on which some $8,000,000 had already been expended, together with upwards of 1,000,000 acres of valuable land. The proceeds of these mortgage bonds would also be expended in extending the road, thereby increasing the security of the bond-holder. As no other company in this country within our knowledge has so large a basis on which to predicate a mortgage, we feel sure that they would soon have become a favorite investment.

A general bill having the above object in view, was introduced into our legislature at its recent session. It originated in the Senate. A motion to let it lie over until the adjourned session in November next, only prevailed by the casting vote of the President being given in its favor. And even then it would not have carried, but for the unfortunate absence from his seat of one of the friends of the measure—a Senator from this county.

In the House it is believed that a large majority were in favor of the measure. And its friends confidently rely upon its becoming a law at the November session. This, it is believed, will infuse new energy into our whole railroad system, and will finally insure their ultimate and rapid completion. The delay, however, will operate seriously to the disadvantage of the company, as no very active steps can be taken by your Board until this or some other general system of policy shall be adopted.

After the failure in the Senate of the above measure, a bill granting additional State aid, to the amount of three hundred thousand dollars, to be applied in the construction of our road west of Jefferson City, was introduced, and became a law.

The second section, however, located the same through "Johnson county, and not north of Warrensburg." This, at one time, was thought by the Chief Engineer, the "best and most practicable route," and was so recommended by him to the Board of Directors. More full and accurate surveys, made during the past summer and fall, proved that he had been mistaken, and that the Simp-

son's Ridge route (some eight or ten miles north of Warrensburg) was far its superior, being three and a quarter miles shorter, with fifty-two feet grades to the mile, while the route by Warrensburg called for sixty feet grades, and would cost $179,000 more to construct it; while, if we take into account its working efficiency, it would make a difference in favor of the Simpson's Ridge route, of nearly, or quite, $300,000.

The Board, looking to this state of facts, postponed its acceptance for further consideration, until the second Wednesday in May.

It is confidently anticipated that the general bill heretofore alluded to, looking to the release of the State lien, and the adoption of a plan for the successful completion of our railroad system, will meet with the most favorable consideration at the hands of our Representatives, at the adjourned session in November.

THE LAND GRANT.—By the report of the land agent (Mr. Colman,) which is herewith attached, you will see what had been done in that department the past year. This valuable grant has not as yet been of much aid to the company, but will eventually prove of great value, and will go far towards furnishing the means for the construction of the entire Southwest branch of our road.

The last annual report advised you that a contract had been entered into with Messrs. A. S. Diven & Co., for the construction of that entire line, on the condition of our raising an additional subscription of five hundred thousand dollars. This we felt sure of being able to accomplish along the line of the road West of Franklin. To this end vigorous efforts were made along the entire line, first by Mr. R. S. Elliott, and afterwards by Mr. Ford. Owing, however, to the failure of the crops, in consequence of the severe drouth of last season, the people had become so averse to embarking in any new undertakings, or assuming new liabilities, that we only secured about $343,000, mostly county subscriptions, made under and in conformity to the general railroad law of this State. In consequence of this failure, we could not compel the contractors to commence the work. This portion of the work, therefore, remains in about the same situation as at the date of the last annual report. An effort will soon be made, however, (which, under the more favorable prospects of this season, we trust, will prove successful,) to secure the balance of that subscription, so as to compel the commencement of that important portion of our line.

By referring to the report (herewith attached) of the land agent (Mr. Thos. C. Johnson) you will see the operations in that department for the past year. A great amount of labor has been performed, and many perplexing questions settled, as will more fully appear from an examination of the report. There is no question but that by his exertions he has saved to the company a large sum of money, while by his pleasing address he has excited friendly feelings towards the company, among the people living along the

line of the road, that cannot be otherwise than favorable to its interests.

All of which is respectfully submitted on behalf of the Board.

HUDSON E. BRIDGE,
President.

Jefferson and Lake Pontchartrain Railroad.
NEW ROUTE FROM THE WEST TO MOBILE.

The opening of the *Jefferson and Lake Pontchartrain Railroad* affords facilities to travellers and freight passing from the Mississippi River to Mobile, which are worthy of the attention of merchants and others having business relations in the region east of New Orleans.

Alabama is a large consumer of western produce, and it is important to producers and consumers that transportation and travel between the two regions should be made as cheap, expeditious and safe as practicable.

Several important advantages are gained by landing freight designed for Mobile, at the Railroad depot above the city; but we have met with no estimates in detail showing the difference of cost on the two routes. The following extract from *The Louisiana Statesman* will show, however, that time as well as money can be saved by transporting produce over the road as compared with the city route.

"A merchant of Pensacola, Mobile or of any other city or town bordering the lakes or gulf, orders a thousand barrels of flour in Cincinnati. It is consigned to a forwarding house in New Orleans, and landed on the levee. From thence it is transported by dray to the depot of the Pontchartrain rail road — a distance of nearly two miles, at a cost of some ten cents per barrel, and exposed on the levee and during its transit to injury from the elements. Without calculating a risk of contingent damages and loss of time, here, then, is the snug little item of one hundred dollars, which might have been saved to the party ordering the article, by landing it at Carrollton.

The Jefferson and Lake Pontchartrain rail road links the levee with the lake. No drays need be employed. A transit of sixty feet, over which barrels may be rolled is only necessary to transfer freight from steamboats to the cars; and the multitude of these vehicles owned by the company would at all times insure its prompt

conveyance to the lake. In fact, so superior are their facilities for rapid transportation, that within three hours after a thousand barrels of flour should have been placed on the levee, they may be transported to the lake, stowed on board steamboat, and be on their way of their destination. The time of transit may be shortened one day at least by adopting this route; and when it is considered that rapidity of transit, as well as of personal conveyance is the peculiar desideratum of the age, this fact of itself will prove no mean recommendation to the proposed route. In the event of bad weather, the company have the same means, in the shape of enclosed cars and an abundance of tarpaulins, of protecting the property from injury as any body else."

Moreover, in case yellow fever or other epidemics should prevail in New Orleans, this route affords the means of traveling from the West to Mobile without incurring the risk incident to passing through the city. All things considered, we think it would be difficult to find any other railroad, of no greater length, which is so well calculated to promote the public welfare, and we commend the facilities which it affords to our merchants and the community at large. We refer our readers to the advertisement of the company, which will be found in our advertising columns.

Panama Railroad Completed.

Laying the foundation of the monument to be erected in commemoration of the work.

The opening of this highway between the two great oceans was celebrated on the 16th day of February, 1855. Hon. J. B. Bowlin, of Mo., Minister from the U. S. to New Grenada, being on his way to Bogota, delivered a very neat and appropriate address on the occasion. The completion of this great enterprise will forever stand out as a prominent event in the history of civilization, and we congratulate Judge Bowlin upon his good fortune in being present and having an opportunity of officiating in the ceremonies of the day. The Panama Railroad was chartered by the Legislature of New York by an act of April 7, 1849, and in June of the same year, the company was organized. Partial surveys having been made, a party of thirty men commenced clearing the ground early in 1850. Whole length of road 49 miles, cost about $7,000,000. We copy the following remarks and tariff of charges from the "American Railway Times" of February 15, 1855.

"TARIFF ON THE PANAMA RAILWAY. — This road has been finished throughout, and a letter from Major Totten, the Engineer, gives a very favorable account of its efficiency. At the last account the road was in full operation, and business was so good that the Superintendent had no time to write in detail to the Company. The British mail steamer Dee had arrived with 750 packages goods for the west coast of South America, which was being transported over the road, and the next steamer would bring 1,500 packages. The agent of the steamer line predicts a very large business from this source. We annex the tariff of passenger and freight rates on this road, as a curiosity. The rates of transportation over a road only about 50 miles long will, to the comprehension of our northern managers, appear truly enormous. The reasons for some of the distinctions between different classes of freight are not very apparent, but time, probably, will arrange all the discrepancies:

TARIFF OF RATES FOR PASSAGE AND FREIGHT.—Price of passage through, $25; children under 12 years of age, half price.

Commutation, for residents on the Isthmus only, $50 p. month.

SPECIAL RATES OF FREIGHT. — Expense freight for passenger trains, 10 cents per pound.

Express freight for freight trains, 6c. per lb.

Baggage of passengers, 10c. per lb.

Gold, one quarter of 1 per cent.

Silver one half of 1 per cent.

Jewelry and precious stones, one quarter of 1 per cent.

Indigo and cochineal, 2 cents per lb.

Bark, 2 cents per lb.

Coffee and Cocoa, 1 cent per lb.

Coal in bulk, $9 per ton, 2,240 lb.

Coal in bags, $7 per ton, 2,240 lb.

Iron in pigs, $7.50 per ton, 2,240 lb.

Iron, wrought, cast or rolled, except machinery, $10 per ton, 2,240 lb.

Lumber—White Pine, per 1000 feet, $18.
Yellow Pine, per 1000 feet, $20.
Oak, per 1000 feet, $22.
Shingles, per 1000, $5.

Horses, at owner's risk, each $40.

Mules, at owner's risk, each $20.

Cattle, at owner's risk, each $7.

Swine, of all sizes, $2.

Demijohns, filled, 5 gallons, each $2

Whale oil, per gallon, 5 cents.

CLASSIFICATION OF FREIGHT. — First class freight, as per description annexed, 3 cents per lb.

Second class freight, as per description annexed, 2c. per lb.

Third class freight, as per description annexed, 1c. per lb.

All articles not specially named, to be assimilated.

First Class. — Dry Goods, Clothing, Medicines, Wines and Liquors, Cigars, Books and Stationary, Glassware, Furniture, Hats and Caps, Tea, Boots and Shoes, Harness, Preserved Meats and Fruits, Eggs in barrels and boxes, Carriages, Fire-arms, Hollow Ware, Umbrellas, Matches, Stoves, Mats, Nuts.

Second Class.—Machinery, Crockery, Hides, Leather, Ale and Porter, Tobacco, Hardware and Cutlery, Groceries not enumerated, Hams and bacon in casks, Butter and Cheese, Lard, Oranges, Lemons, Bananas, Cocoa Nuts, Chocolate, Candles, Cassave, Oil in barrels going West, Paints.

Third Class. — Beef, Pork, Fish, Flour, Corn, Rice, Meal, Salt, Bread, Crackers, Vegetables, Sugar, Molasses, Steel in bars and boxes, Copper, Nails and Spikes, Rope in bales, Rosin, Tar, Pitch, Dye Woods, Iron Castings, Bricks, Cement, Lime, Stone and Marble, Tea eastward.

Bounty Land Law of 1855.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That each of the surviving commissioned and non-commissioned officers, musicians, and privates, whether of regulars, volunteers, rangers, or militia, who was regularly mustered into the service of the United States, and every officer, commissioned and non-commissioned, seaman, ordinary seaman, marine, clerk and landsmen in the navy, in any of the wars in which this country has been engaged since seventeen hundred and ninety, and each of the survivors of the militia, or volunteers, or State troops of any State or Territory, called into military service, and regularly mustered therein, and whose services have been paid by the United States, shall be entitled to receive a certificate or warrant from the Department of the Interior for one hundred and sixty acres of land; and where any of those who have been so mustered into service and paid shall have received a certificate or warrant, he shall be entitled to a certificate or warrant for such quantity of land as will make, in the whole, with what he may have heretofore received, one hundred and sixty acres to each such person having served as aforesaid: *Provided*, The person so having been in service shall not receive said land warrant if it shall appear by the muster rolls of his regiment or corps that he deserted, or was dishonorably discharged from service.

Provided, further, That the benefits of this section shall be held to extend to wagon-masters and teamsters who may have been employed under the direction of competent authority in time of war, in the transportation of military stores and supplies.

SEC. 2. *And be it further enacted*, That in case of the death of any person who, if living, would be entitled to a certificate or warrant as aforesaid under this act, leaving a widow, or, if no widow, a minor child or children, such widow, or if no widow, such minor child or children, shall be entitled to receive a certificate or warrant for the same quantity of land that such deceased person would be entitled to receive under the provisions of this act, if now living: *Provided*, That a subsequent marriage shall not impair the right of any such widow to such warrant if she be a widow at the time of making her application: *And, provided, further*, That those shall be considered minors who are so at the time this act shall take effect.

SEC. 3. *And be it further enacted*, That in no case shall any such certificate or warrant be issued for any service less than fourteen days, except where the person shall actually have been engaged in battle, and unless the party claiming such certificate or warrant shall establish his or her right thereto by recorded evidence of said service.

SEC. 4. *And be it further enacted*, That said certificate or warrant may be assigned, transferred, and located by the warrantees, their assignees, or their heirs at law, according to the provisions of existing laws regulating the assignment, transfer, and location of bounty-land warrants.

SEC. 5. *And be it further enacted*, That no warrant issued under the provisions of this act shall be located on any public lands, except such shall at that time be subject to sale at either the minimum or lower graduated prices.

SEC. 6. *And be it further enacted*, That the Registers and Receivers of the several land offices shall be severally authorized to charge and receive for their services in locating all warrants under the provisions of this act, the same compensation or per centage to which they are entitled by law for sales of the public lands, for cash, at the rate of one dollar and twenty-five cents per acre. The said compensation to be paid by the assignees or holders of such warrants.

SEC. 7. *And be it further enacted*, That the provisions of this act, and all the bounty land laws heretofore passed by Congress, shall be extended to Indians, in the same manner and to the same extent as if the said Indians had been white men.

SEC. 8. *And be it further enacted*, That the officers and soldiers of the Revolutionary war, or their widows or minor children, shall be entitled to the benefits of this act.

SEC. 9. *And be it further enacted*, That the benefits of this act shall be applied to and embrace those who served as volunteers

at the invasion of Plattsburg, in September, eighteen hundred and fourteen; also, at the battle of Kings' Mountain, in the revolutionary war, and the battle of Nickojack against the confederated savages of the South.

SEC. 10. *And be it further enacted*, That the provisions of this act shall apply to the chaplains who served with the army in the several wars of the country.

SEC. 11. *And be it further enacted*, That the provisions of this act be applied to flotilla-men and to those who served as volunteers at the attack on Lewistown, in Delaware, by the British fleet, in the war of 1812–15.

LITERARY DEPARTMENT.

The Adventures of the Last Abencerage.

From the French of Chateaubriand.

BY THE JUNIOR EDITOR.

Continued from page 376, vol. 13.—Concluded.

Aben-Hamet starts, he arrives at the door of an old Mosque converted by the Christians into a church. His heart filled with sorrow and with religion, he entered into the temple, which in former times was that of his God and of his country. The vesper prayer was just ended: not another person was seen in the church. A holy twilight reigned among a multitude of columns which resembled the trunks of the trees of a forest regularly planted. The light architecture of the Arabs was blended with the gothic style, and, without loosing any of its elegance, it was marked by a gravity more suitable for meditations. A few lamps spread their dim light through the opening of the arches; but by the brightness of many burning wax tapers, the glittering altar of the sanctuary could be seen: it sparkled with gold and with jewels. The Spaniards thought their highest glory consisted in the sacrifice of their riches for the purpose of adorning the objects of their worship; and the image of the living God placed amid veils of lace-work, crowns of pearls and clusters of rubies, is adored by a half-naked people.

Not a seat could be seen within the vast space: a floor of marble, under which the dead were buried, served for the great as well as for the small to kneel before the Lord. Aben-Hamet advanced

quietly into the deserted body of the church, which echoed only the sound of his footsteps. His soul partook of the memories which that ancient building of the religion of the Moors retraced on his mind, and the feelings which the religion of the Christians excited in his heart. At the foot of a column he caught the glimpse of a motionless figure, which at first he took for a statue on a tomb. He draws near it; he discovers a young cavalier on his knees, with head humbly bowed and both arms folded on his breast. That cavalier made not the slightest movement at the sound of the footsteps of Aben-Hamet; not the least distraction, not the least exterior sign of life was shown throughout his profound prayer. His sword was lying on the marble before him; and his hat, loaded with plumes, was placed on the floor by his side: he seemed to be fixed in that attitude by the power of enchantment. It was Lautrec: "Ah!" said the Aberencerage to himself, "this young and gallant Frenchman asks for some signal favor from Heaven; this warrior, already celebrated by his courage, pours forth his heart here before the sovereign of the skies, as the most humble and the most obscure of men. Let us then also pray to the God of cavaliers and of glory."

Aben-Hamet was in the act of kneeling on the marble, when he saw, by the light of a lamp, Arabic marks and a verse from the Koran, which appeared under a plaster half fallen. Remorse pierced his heart, and he hastened to quit the building where he had indulged the idea of becoming faithless to his religion and to his country.

The grave-yard which surrounded this ancient mosque, was a species of garden, planted with oranges, with cypress, with palm-trees, and moistened by two fountains; a cloister extended along its side. Aben-Hamet, while passing under one of the porticos, saw a woman entering the church. Although she was wrapped in a veil, the Abencerage recognized the daughter of the Duke of Santa Fe; he stopped her, and said: "Dost thou come to seek Lautrec in this temple?"

"Quit these unworthy jealousies," replied Blanca; "if I loved thee no more, I would tell thee so; I despise the idea of deceiving thee. I come here to pray for thee; thou only art the object of my vows: I forget my soul for thine. Thou shouldst not intoxicate me with the poison of thy love, or else thou shouldst consent to serve the God which I serve. Thou troublest our whole family;

my brother hates thee; my father is overwhelmed with sorrow, because I refuse to choose a husband. Seest thou not that my health is lost? Look at that asylum of the dead; it is charmed! I will rest there soon, if thou dost not hasten to receive my faith at the foot of the altar of the Christians. By degrees, the trials I endure threaten my life; the passion with which thou inspirest me, will not always sustain my frail existence: mind, O Moor, speaking in thy language, that the fire which kindles is also the fire which consumes the torch."

Blanca entered the church, and left Aben-Hamet overwhelmed by these last words.

It is finished, the Abencerage is conquered; he determines to renounce the errors of his worship; long enough has he struggled. The fear of seeing Blanca die prevails over every other passion in the heart of Aben-Hamet. "After all," said he to himself, "the God of the Christians is perhaps the true God. That God is always the God of noble souls, since it is that of Blanca, of Don Carlos and of Lautrec."

In this frame of mind, Aben-Hamet awaited with impatience for the next day, to make known his resolution to Blanca, and to change a life of sorrow and of tears, for a life of joy and of happiness. He could not visit the palace of the Duke of Santa Fe until evening. He learned that Blanca had gone with her brother to the Generalife, where Lautrec gave a feast. Aben-Hamet, agitated by new suspicions, flies on the track of Blanca. Lautrec blushed on seeing the Abencerage appear: as to Don Carlos, he received the Moor with a cold politeness, irradiated by esteem.

Lautrec had furnished the finest fruits of Spain and of Africa in one of the halls of the Generalife, called the hall of the cavaliers. All around that hall were hung the portraits of princes and of cavaliers, conquerors of the Moors, Pelasgo, the Cid, Gonzalvo, of Cordova. The sword of the last king of Grenada was hanging underneath these portraits. Aben-Hamet restrained his grief, and looking at these pictures, said only as the lion, "We know not how to paint."

The generous Lautrec, who saw the eyes of the Abencerage turning in spite of himself towards the sword of Boabdil, said to him: "Cavalier Moor, had I foreseen that you would have done me the honor to come to this feast, I would not have received you

here. Every day one loses a sword, and I have seen the most valiant of kings resign his own to his happy enemy."

"Ah!" exclaimed the Moor, while covering his face with a fold of his robe, "one could lose it as Francis I.; but as Boabdil!***"

Night came; lights are brought; conversation turns. One prays Don Carlos to tell the story of the discovery of Mexico. He speaks of that unknown world with the pompous eloquence common to the Spanish nation. He describes the misfortunes of Montezuma, the manners of the Americans, the miracles of Castilian valor, and even the cruelties of his compatriots, which to him seemed to merit neither blame nor praise. These recitals enchanted Aben-Hamet, whose passion for wonderful histories betrayed his Arabian blood. He drew in his turn a picture of the Ottoman empire, lately founded on the ruins of Constantinople, blending with it regrets over the first empire of Mahomet; happy time, when the commander of the faithful saw shining around him Zobeide, Flower of beauty, Strength of hearts, Tourmente, and that generous Ganem, slave for love. As to Lautrec, he painted the gallant court of Francis I., arts reviving from the womb of barbarism, honor, loyalty, chivalry of the ancient times, combined with the politeness of the civilized ages; gothic turrets adorned with the styles of Greece, and Gallic ladies enhancing the splendor of their attire by Athenian elegance.

After these discourses, Lautrec who wished to amuse the divinity of this fete, took a guitar, and sang that romance which he had composed to an air of the mountains of his country.

How often, through a pensive glance,
Have birth-place memories wrought a trance!
Sister, charming were those days
Of France!
Oh native land, thee I'll praise
Always!

Rememb'rest how our mother here,
The hearth-fire of our cot would cheer?
And on her joyous heart would press
Us, dear?
And how her white locks we'd caress
And bless?

My sister, seest thou still that shore,
The castle washed by waves of Dore,
And that old tower so grey
Of Moor,
Where rang the bell at the first ray
Of day?

Rememb'rest thou that lake so wide,
O'er which the swift-winged swallows glide,
Those slender reeds bent by the air
Aside,
And then the glorious sunset there
So fair?

Who can to me my Helen show,
My mountains where the great oaks grow?
Their memory steeps my live-long days
In woe:
My native land, thee I'll praise
Always!

Lautrec, on closing the last lines, wiped away, with his glove, a tear which the memory of the attractive land of France drew to his eye. The woes of the noble prisoner were keenly felt by Aben-Hamet who deplored as Lautrec the loss of his country. Solicited to take the guitar in his turn, he excused himself, by saying that he knew only one romance, and that it would afford but little pleasure to christians.

"If they are infidels who mourn over our victories," replied Don Carlos disdainfully, "you can sing; tears are permitted to the vanquished."

"Yes," said Blanca; "and for that cause it is that our fathers, subdued heretofore under the yoke of the Moors, have left us so many songs of sorrow."

Aben-Hamet then sang that ballad, which he had learned from a poet of the tribe of the Abencerage:

The king Don Juan,
Seeing in the van,
On the mountain main,
Grenada of Spain;
Said, with sudden start:
I, darling land,
Give thee my hand,
With all my heart.

Thee will I marry,
And to thee carry,
For gifts, yes, I will,
Cordua and Seville.
Superb attire
And pearls I'll buy
For thee whom I
More than admire.

Grenada replied:
To the Moor I'm bride;

Great king of Leon,
Tempt me not, begone.
Keep thy offering:
  I can display
  Splendid array
  And brave offspring.

Thus didst thou reply,
And thus too didst lie:
Wrong, not to be borne
Grenada is forsworn!
A cursed Christian,
  Abencerage,
  Holds heritage:
  It was writen!

The camel no more
To the tomb near shore
Of the stream, will bring
Hadgi of Medine.
A cursed Christian,
  Abencerage,
  Holds heritage:
  It was written!

O fair Alhambra!
Palace of Allah!
City of fountains!
Stream of green mountains!
A cursed Christian,
  Abencerage,
  Holds heritage:
  It was written!

The simplicity of these mournful melodies had touched even the proud Don Carlos, in spite of the curses uttered against the Christians. He greatly prefered that they would dispense with a song from himself; but, in courtesy toward Lautrec, he thought it was his duty to yield to his wishes. Aben-Hamet gave the guitar to the brother of Blanca, who sang the exploits of the Cid, his illustrious ancestor.

Ready to start for the African plain,
The Cid all armed and brilliant with valor,
Took his guitar, and, seated by Chimene,
Sung these words inspired by love and honor:

Chimene has said: go, battle with the Moor;
And from that battle return thou victor:
Rodrigo adores me, then I'll be sure,
If his love is subdued by his honor.

Give me, give me my helmet and my lance!
Rodrigo's heart is truly set on her:

In the mid-fight triumphant he'll advance;
His cry will be: *My lady and honor.*

Moor extolled for thy gallantry in vain,
My noble song, over thy tones victor,
Will soon produce a rage in Spain,
Painting the passion of love with honor.

In Andalusie's sweet vale will be heard,
Christians telling the deeds of my valor:
To his own life, they will say he prefered
His God, his king, his Chimene and honor.

Don Carlos had appeared so proud while singing these words with a voice manly and sonorous, that one would have taken him for the Cid himself. Lautrec participated in the warlike enthusiasm of his friend; but the Abencerage had grown pale at the name of the Cid.

"That cavalier," said he, "whom the Christians call the Flower of battles, bears among us the name of Cruel. If his generosity had equalled his valor * * *"

"His generosity," spiritedly replied Don Carlos, interrupting Aben-Hamet, "surpassed even his courage; and there is no one but the Moors who can calumniate the hero to whom my family owes life."

"What sayst thou?" exclaimed Aben-Hamet, leaping from the seat where he was half reposing: "Dost thou count the Cid among thy ancestors?"

"His blood flows in my veins," replied Don Carlos; "and I recognize within me that noble blood, by the hatred which burns in my heart against the enemies of my God."

"So," said Aben-Hamet, looking on Blanca, "you are of the house of those Bivars, who, after the conquest of Grenada, invaded the domestic circles of the unhappy Abencerages, and killed an old cavalier of that name, who wished to defend the tomb of his fathers!"

"Moor," exclaimed Don Carlos fired with anger, "know that I will not brook the question. If I now possess the spoils of the Abencerage, my ancestors acquired them at the price of their blood, and they are indebted only to their sword."

"Yet one word," said Aben-Hamet becoming more excited: "we knew not in our exile that the Bivars had borne the title of Santa Fe; it is this that has caused my error."

"It was," replied Don Carlos, "on that same Bivar, conqueror

of the Abencerages, that this title was confered by Ferdinand the Catholic."

The head of Aben-Hamet was bowed upon his breast: he stood in silent astonishment before Don Carlos, Lautrec and Blanca. Two torrents of tears flowed from his eyes on the poinard attached to his girdle. "Pardon me," said he; "men, I know, should not shed tears: henceforth mine will never flow out, although many will remain for me to weep; hear me: Blanca, my love for thee equals the ardor of the burning winds of Arabia. I was conquered; I could live no longer without thee. Yesterday, the sight of that French cavalier at prayers, thy words in the burial-place of the temple, have made me resolve to recognize thy God, and to offer thee my faith."

A motion of joy by Blanca, and of surprise by Don Carlos, interrupted Aben-Hamet; Lautrec concealed his face with both his hands. The Moor divined his thought; and shaking his head with a distracting smile: "Cavalier," said he, "lose not all hope; and thou, Blanca, weep forever over the last Abencerage."

Blanca, Don Carlos, Lautrec, all three raise their hands toward heaven, and exclaim: "The last Abencerage!"

Silence reigns; fear, hope, hate, love, astonishment, jealousy, agitate all hearts; Blanca soon falls on her knees. "God of goodness!" said she, "thou dost justify my choice; I could love only the descendant of heroes."

"My sister," exclaimed Don Carlos irritated, "mind that you are here before Lautrec!"

"Don Carlos," said Aben-Hamet, "suspend thy wrath; it is for me to restore your peace." Then addressing himself to Blanca who was taking her seat: "Houri of heaven, genius of love and of beauty, even to his last sigh, Aben-Hamet will be thy slave; but know the whole extent of his misfortune. That old man, sacrificed by thy ancestor, while defending his household-gods, was the father of my father; learn now a secret which I have concealed from thee, or rather which thou hadst made me forget. When I came for the first time to visit this sad country, my main design was to seek some son of the Bivars, who could satisfy me for the blood which his fathers had shed."

"Ah! indeed!" said Blanca with a mournful voice, but sustained by the tone of a great soul, "what is thy resolution?"

"Only that which is worthy thee," replied Aben-Hamet: "to

restore thee thy vows, to satisfy, by my eternal absence and by my death, what we both owe to the enmity of our Gods, of our countries and of our families. If ever my image become effaced from thy heart; if time, which ruins all things, removes from thy mind the memory of the Abencerage * * * this French cavalier * * * Thou owest this sacrifice to thy brother."

Lautrec springs up with impetuosity, throws himself into the arms of the Moor. "Aben-Hamet," he exclaims, "think not to conquer me in generosity: I am a Frenchman; Bayard armed me cavalier; I have shed my blood for my king: I will be, as my godfather and as my prince, without fear and without reproach. If thou wilt remain among us, I will pray Don Carlos to grant thee the hand of his sister; if thou wilt leave Grenada, never a word of my love shall trouble thy lady. Thou shalt not bear in thy exile the hard thought that Lautrec, insensible to thy virtue, seeks to profit by thy misfortune."

And the young cavalier pressed the Moor to his heart, with the warmth and the vivacity of a Frenchman.

"Cavaliers," said Don Carlos in his turn, "I wait only to know of your illustrious races. Aben-Hamet, by what sign can I recognize you as the last Abencerage?"

"By my conduct," replied Aben-Hamet.

"I admire it," said the Spaniard; "but before I explain myself, show me some sign of your birth."

Aben-Hamet drew from his bosom the hereditary ring of the Abencerages, which he carried attached to a chain of gold.

At this sign, Don Carlos tendered his hand to the unhappy Aben-Hamet.

"Sire cavalier," said he, "I hold you to be an honest man and a genuine son of kings. You honor me by your designs towards my family: I accept the battle which you have come secretly to seek. If I am conquered, all my wealth, heretofore all yours, shall be faithfully restored to you. If you renounce the project of the battle, accept in your turn that which I offer you: become a christian, and receive the hand of my sister, which Lautrec has asked for you."

The temptation was great; but it was not beyond the strength of Aben-Hamet. If love with all its power spoke to the heart of the Abencerage, on the other part he was struck only with terror at the idea of uniting the blood of the persecutors to the blood of

the persecuted. The shade of his ancestor seemed to arise from the tomb and reproach him for that sacrilegious alliance. Pierced through with grief, Aben-Hamet exclaims: "Ah! must I meet here so many sublime souls, so many generous characters, to feel more deeply what I lose! Let Blanca utter; let her say what I must do to be more worthy of her love!"

Blanca exclaims: "Return to the desert!" and she faints away.

Aben-Hamet prostrated himself, adored Blanca even more than heaven, then went away without uttering a single word. On that very night he started for Malaga, and embarked on a vessel which intended to touch at Oran. He found encamped near that city the caravan which every third year starts from Morocco, crosses Africa, resorts to Egypt, and meets in Yemen the caravan of Mecca. Aben Hamet joined the band of pilgrims.

Blanca, whose days were at first threatened, revived. Lautrec, faithful to the word which he had given to the Abencerage, removed, and never a word of his love or of his grief, troubled the melancholy of the daughter of the Duke of Santa Fe. Every year Blanca went wandering over the mountains of Malaga, at that point of time when her lover used to return from Africa; she seated herself on the rocks, looked on the sea, at the distant vessels, and returned again to Grenada; she passed the remainder of her days among the ruins of the Alhambra. She complained not; she wept not; she spoke never of Aben-Hamet: a stranger would have thought her happy. She remained the only one of her family. Her father died of sorrow, and Don Carlos was killed in a duel, Lautrec serving him as second. No one ever knew what was the destiny of Aben-Hamet.

When one leaves Tunis by the gate which leads to the ruins of Carthage, he finds a cemetery: under a palm-tree in a corner of that cemetery, they have shown me a tomb which they call *The tomb of the last Abencerage.* It is perfectly plain; a solid sepulchral rock: only, according to a custom of the Moors, they have cut with a chisel in the middle of that rock a slightly hollow place. The water from the rain collects at the bottom of that dismal cut, and serves in a burning climate to quench the thirst of the bird of heaven.

END OF THE LAST ABENCERAGE.

A WORD TO OUR PATRONS.

A reasonable regard for our personal interests compels us to refer to the fact that the accounts of many of our subscribers have remained unsettled for several years. This is perhaps as much our fault as theirs, for we have rarely sent out accounts or solicited payment from those residing out of the city. The amount now due this office, is more than we can conveniently permit to remain outstanding; and we respectfully request our friends to examine their receipts and remit the amount they find due at their earliest convenience.

After such long indulgence, we feel persuaded that no subscriber who feels an interest in our work will delay payment when informed that the small amount which he owes is positively needed. Remittance may be made at our risk through the Post Office.

NOTICES. — Many brilliant and touching thoughts in our possession are prevented from appearing in the present number of our work. "The Little Footprint," by E. P. Lesdernier, "The Exile," from the French of Lamennais, by Irene; "The Early Dead," "My Dear Old Home," and "Lines on reading a denunciation of Gen. Lewis Cass," by L. L. C., "Oh! let me go!" and "A Farewell," by Valeria, are intellectual jewels radiant with spirit and pathos. Gladly would we let them shine out in the pure beauty of their own intrinsic light, rather than by the dimness of our reflexions, but bulkier articles had preceded them and hide them for the present.

An extended notice of two works, by F. Ahn, one, "A new, practical and easy method of learning the German language," and the other to acquire the French, also of a work by A. Baskerville, on "The Poetry of Germany," is crowded out of our columns. These valuable and interesting works are for sale by E. Buehler, 31, Third Street, St. Louis, cheap. "Thoughts about St. Louis," by J. H., hit the nail on the head. We hope to hammer away at it elaborately. The distinguished and the rising dramatic artists, Buchanan, Anderson, St. Clair, Mitchell, and others, the classic reader Mrs. Lesdernier, the charming uocalists DeVries and Munoz, the fine pianist Lazare, and the mirth provoking Campbells, who have appeared in St. Louis last month, must pass grouped together as a galaxy of stars. Balmer & Weber are issuing a variety of original songs, words and music all western: Bell Brandon, Ellen May, Wenona of the Wave, Prairie Flower, Kaloolah or the War Path: Songs of the Prairies, words by Garrett, music by Woolcott. Western art must be popular.